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ONE MONTGOMERY STREET, TELESIS TOWER  
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June 14, 1991

**RECEIVED**

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NEW YORK, NEW YORK 10166-0193

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AFFILIATED SAUDI ARABIA OFFICE  
CHAMBER OF COMMERCE BUILDING  
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RIYADH 11454, SAUDI ARABIA

OUR FILE NUMBER  
**G 99999-00000**

Chris Stubbs  
South Coast Groundwater Section, H-6-4  
United States Environmental Protection Agency  
Post Office Box 193062  
San Francisco, CA 94119-3036

Re: Hawker Pacific Inc.  
11310 Sherman Way  
Sun Valley, California; EPA Reference T-4-1

Dear Chris:

Enclosed is the response of Hawker Pacific Inc. to EPA's second request for information to it pertaining to the above facility delivered by letter dated March 14, 1991. Pursuant to my conversation with yourself and Marcia Preston, this response is timely. Also pursuant to those conversations, the company is submitting the most recent two years of tax returns and financial reports, and the financial reports are the one available recent year of audited financial statements for the company and are otherwise the financial statements of its parent entity (contained in its annual reports -- of which 3 are actually enclosed). Our agreement is that EPA's acceptance of fewer years financial data shall not preclude EPA from seeking the other years at some later time. I also enclose for your convenience a copy of Hawker Pacific's response to an earlier (February 1989) § 104(e) request (without exhibits). The current response refers in several places to the prior response.

**000029**

GIBSON, DUNN & CRUTCHER

June 14, 1991

Page 2

If you have any questions regarding this response,  
please call me.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Mike Monahan".

Michael A. Monahan

MAM/par

cc: Marcia Preston, Asst. Regional Counsel, EPA

LA911650.031

MICHAEL A. MONAHAN  
GIBSON, DUNN & CRUTCHER  
333 South Grand Avenue  
Los Angeles, California 90071  
(213) 229-7000

Attorneys for  
HAWKER PACIFIC INC.

BEFORE THE  
UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY

In re Hawker Pacific Inc.,	)	RESPONSE OF HAWKER
facility at 11310 Sherman	)	PACIFIC INC. TO SECOND
Way, Sun Valley, California;	)	EPA REQUEST FOR
San Fernando Valley	)	INFORMATION PURSUANT TO
Groundwater Investigation	)	CERCLA § 104(e)
_____	)	

This response is made by Hawker Pacific Inc. ("Hawker Pacific") to the request for information under CERCLA § 104(e), 42 U.S.C. § 9604(e) ("Second EPA Request"), made by the United States Environmental Protection Agency ("EPA") by letter dated March 14, 1991, addressed to D. L. Lokken, regarding Hawker Pacific's facility at 11310 Sherman Way, Sun Valley, California 91352. Much of the information sought by the Second EPA Request was provided in response to EPA's request for information under CERCLA § 104(e), served by letter dated February 1989 ("First EPA Request"), by response dated July 7, 1989.

The persons who provided information regarding the facility included in these responses are Erik Johnson and Jeff Belzer, who are currently Hawker Pacific employees who can be contacted through Hawker Pacific counsel.

This response does not constitute any admission by Hawker Pacific that it has contributed to or is responsible for the San Fernando Valley groundwater contamination referred to in the EPA's request, and Hawker Pacific denies any such contribution or responsibility.

This response includes certain exhibits as to which Hawker Pacific claims confidentiality pursuant to CERCLA § 104(e)(7)(E) and (F). These exhibits are enclosed in separate envelopes marked to indicate confidentiality.

Hawker Pacific objects to Instruction 3 of the Request insofar as it seeks to establish a continuing obligation upon Hawker Pacific to report information subsequently discovered or learned by Hawker Pacific, on the grounds that such a continuing request is beyond the scope of EPA authority under CERCLA § 104(e) and would be impracticable or impossible to implement.

Without waiving the foregoing qualifications and objections, Hawker Pacific further responds to the Requests as follows:

- 1. List the EPA RCRA Identification Numbers of the Respondent, if any.**

The EPA I.D. Number for this site is CAT 000646257.



**2. Describe the nature and dates of present and past operations at the facility.**

Hawker Pacific overhauls and repairs, and manufactures, aircraft landing gear and flight control equipment at this facility. The operations at the site consist of receiving and inspection of material and equipment, machining and grinding, plating, painting, assembly and testing of new and reassembled equipment. Hawker Pacific has conducted such operations at the site since April 1, 1987, when it purchased assets for that purpose from Inchcape PLC. At that time, its facility included buildings currently numbered 1, 2, 3 and 5. In December 1987, its facility was expanded to include the building currently numbered No. 4. (These building numbers have changed over time: Current Buildings 4 and 5 were referred to as Buildings 5 and 4, respectively in Hawker Pacific's response to First EPA Request.) See the response to Question 5, below, regarding the operations at the site prior to Hawker Pacific's.

**3. Identify the current owner(s) of the facility. State the dates during which the current owner owned, operated, or leased any portion of the facility, and provide copies of all documents evidencing or relating to such ownership, operation, or lease, including, but not limited to, purchase and sale agreements, deeds, and leases.**

The property under Buildings 1, 2 and 3 is owned by Gordon Wagner and Joseph Bassinger, and Hawker Pacific believes it has been since 1963. During the period 1963 to 1969, the owners operated a business known as Stellar Hydraulics on part of the current site. From 1969 to April 1987, Hawker Pacific believes, the owners leased the property to (or otherwise allowed it to be used by) the companies identified in the response to Question 5, below. Since April 1987, the owners have leased the property to Hawker Pacific. A copy of the current lease is submitted herewith as Exhibit 1.

The property under Buildings 4 and 5 is owned by Industrial Bowling Corp. Hawker Pacific does not know how long Industrial Bowling has owned the property. From 1967 to April 1987, Hawker Pacific believes, the owner leased the Building 5 property to (or otherwise allowed it to be used by) the businesses identified in the response to Question 5, below. Since April 1987, the owners have leased the property to Hawker Pacific. A copy of the lease is submitted herewith as Exhibit 2. For some period prior to December 1987, the owner leased the Building 4 property to (or otherwise allowed it to be used by) Laura Scudder or a Laura Scudder distributor. Since December 1987, the owner has leased

the property to Hawker Pacific. A copy of the lease is submitted herewith as Exhibit 3.

4. Identify all prior owners of the facility. For each prior owner further identify:
- a. The dates of ownership;
  - b. All evidence that hazardous materials were released or threatened to be released at the facility during the period that they owned the facility.

Hawker Pacific does not know the identity of the prior owners of the properties referred to in response to Question 3.

5. Identify the prior operators and lessees of the facility. For each such operator or lessee, further identify:
- a. The dates of their operations at or lease of the facility;
  - b. The nature of their operations at the facility;
  - c. All evidence that hazardous materials were released or threatened to be released at the facility during the period in which they were operating at the facility.

a.	<u>Period (Approx.)</u>	<u>Operator</u>	<u>Buildings</u>
	1963-1969	Stellar Hydraulics	1, 2, 5
	1969-1977	Canoga Industries	1, 2, 5
	1977-1979	Zero Corporation	1, 2, 3, 5

1979-1980	Bertea Corporation	1, 2, 3, 5
1980-1982	Parker Hannifin Corp.	1, 2, 3, 5
1982-1987	Inchcape PLC	1, 2, 3, 5
? - 1987	Laura Scudder	4

- b. The prior operators in Buildings 1, 2, 3 and 5 operated businesses generally similar to Hawker Pacific's current business, except that the rotor wing operations were added by Bertea and continued by subsequent operators, and except that Hawker Pacific did not use some of the solvents or other chemicals used by prior operators at the site (as discussed further in response to part (c) of this Question, below).

The prior operator in Building 4 operated a warehouse/delivery truck maintenance facility for Laura Scudder food products.

- c. Analyses of soil samples taken from the leach field area of the Building 4 septic tank system showed trace amounts of toluene and perchloroethylene ("PCE"). Analyses of soil samples from the leach field of the building 3 septic tank system also showed trace toluene. Hawker Pacific has not used PCE at this facility. Hawker Pacific has not used products containing toluene in Buildings 3 or 4, or disposed of any

such product in the Building 3 or 4 septic tank systems. Moreover, lacquer thinner, the product Hawker Pacific has used at the facility containing toluene, also contains other chemicals that were not detected in either leach field. Hawker Pacific believes that Laura Scudder, the prior operator at Building 4, conducted vehicle maintenance operations there; this belief is based, among other things, on used oil filters and other similar materials left at the site by Laura Scudder. Records of prior operators at Buildings 1, 2, 3 and 5 retained by Hawker Pacific indicate that prior operators on those portions of the site used PCE, but only until the early 1980's. (The trace levels of toluene and PCE found in the leach field areas do not threaten groundwater and were deemed insignificant by the Regional Water Board.) Shallow soil samples from the area adjacent to the clarifier in Building 2 also show trace quantities of toluene and PCE. PCE, as stated above, has not been used by Hawker Pacific at the site. No product containing toluene was used or disposed of by Hawker Pacific in this area.

Soil samples taken in the area of a small unused underground tank and an adjacent small sump

between Buildings 1 and 2 contained hydrocarbons (oil), PCE, TCE, TCA, toluene and xylene. The tank was not used by Hawker Pacific and its presence was not discovered by Hawker Pacific until 1989. As stated above, Hawker Pacific has not used PCE at this facility. Hawker Pacific stored in this area only new machine lubricants unlike the chemicals detected in the soil here.

6. Provide a scaled map of the facility which includes the locations of significant features. Describe the physical characteristics of the facility, including, but not limited to, the following:
  - a. Surface structures (e.g., building, tanks, etc.);
  - b. Subsurface structures (e.g., underground tanks, sumps, pits, clarifiers, etc.);
  - c. Ground water wells and dry wells, including drilling logs;
  - d. Past and present storm water drainage system, sanitary sewer system, including septic tank(s) and subsurface disposal field(s);
  - e. Any and all additions, demolitions, or changes of any kind to physical structures on, under, or about the facility, or to the property itself (e.g., excavation work) and state the dates on which such changes occurred.

See diagram and key with descriptions, submitted herewith as Exhibit 4.

7. **Provide all existing technical or analytical information about the facility, including, but not limited to, data and documents related to soil, water (ground and surface), geology, hydrogeology, or air quality on and about the facility.**

See reports submitted herewith as Exhibits 5, 6, 7 and 8.

8. **Are you or your consultants planning to perform any investigations of the soil, water (ground or surface), geology, hydrogeology, or air quality on or about the facility? If so, identify:**

- a. **The nature and scope of these investigations;**
- b. **The contractors or other persons that will undertake these investigations;**
- c. **The purpose of the investigations;**
- d. **The dates when such investigations will take place and be completed;**
- e. **Where on the facility such investigations will take place.**

See work proposal dated May 22, 1991 submitted herewith as Exhibit 9. The work set forth therein is scheduled to begin this month; and it is anticipated that it will be completed in three to four months.

9. Did you acquire the facility after the disposal or placement of the hazardous substances on, in, or at the facility? Describe all of the facts on which you base the answer to this Question.

Hawker Pacific is a lessee. See response to Question 5 above.

10. At the time you acquired the facility, did you know or have reason to know that any hazardous substance was disposed of on, in, or at the facility? Describe all investigations of the facility that you took prior to acquiring the facility, and all of the facts on which you base the answer to this Question.

Hawker Pacific is a lessee. At the time it began operations at the property it did not know or have reason to know of any such disposal. Hawker Pacific did a walk-through inspection.

11. Did you ever transport to the facility or use, purchase, generate, store, treat, dispose, or otherwise handle at the facility any materials, either hazardous or non-hazardous? If the answer to this question is anything but an unqualified "no," identify:

- a. In general terms, the nature and quantity of the non-hazardous materials so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;



- b. The common chemical name, specific chemical name, Chemical Abstract Service (CAS) number, chemical composition, characteristics, and physical state (e.g., solid, liquid, gas) of each hazardous material so transported, used, purchased, generated, stored, treated, disposed, or otherwise handled;
- c. The persons who supplied you with such hazardous material or how each such hazardous material was generated by you;
- d. How each such hazardous material was transported, used, purchased, stored, treated, disposed, or otherwise handled by you;
- e. When each such hazardous material was transported, used, purchased, generated, stored, treated, disposed, or otherwise handled by you;
- f. Where each such hazardous material was used, purchased, generated, stored, treated, disposed, or otherwise handled by you, describing the location(s) and providing a map or diagram of such location(s). Location information should include, but is not limited to, information pertaining to tanks, ponds, treatment facilities, and other units which were historically used to generate, store, treat or dispose of hazardous materials, but which may no longer exist;

- g. The persons who transported and/or disposed of each such hazardous material. If disposal off of the facility occurred, provide a detailed description, including copies of manifests, and identify the location where the hazardous material was transported;
- h. The annual quantity of each such hazardous material used, purchased, generated, stored, treated, transported, disposed, or otherwise handled by you, reported in gallons for liquids and pounds for solids.

(See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2.)

- a. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2.
- b. See Hawker Pacific Inc.'s Response to EPA's First Request, Questions 1 and 2. Hawker Pacific also uses and has used at the facility the following chemicals in the approximate current volumes shown: Sulfuric Acid (2200 lbs/yr); Muriatic (Hydrochloric) Acid (HCL) (1200 lbs/yr); Hydrofluoric Acid (60 gallons); Chromic Acid Flakes (2000 lbs/yr); Fluoroboric Acid (1620 lbs/yr). Material Safety Data Sheets providing further information on the composition and of the

chemicals used by Hawker Pacific are supplied herewith as Exhibit 10.

- c. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2. The primary current suppliers of the chemicals referred to in response to paragraph (b) of this Question are:

Millhorn Chemical and Supply Company  
6142 Walker Avenue  
Maywood, California 90270  
(213) 771-8301  
Plating chemicals and supplies

Rho-Chem Inc.  
Post Office Box 6021  
Inglewood, California 90301  
Solvents supplier

LT Saver  
Shell Oil Distributor  
14117 Aetna Street  
Van Nuys, California 91401  
Oils and fluids supplier lubricating oils  
and hydraulic fluids

- d. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1, 2 and 4.
- e. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2. Hawker Pacific has generated or handled the materials described therein throughout the period it has operated at the site.
- f. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2.
- g. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2. Hawker Pacific

provided copies of manifests with its last response. Copies of subsequent manifests are supplied herewith as Exhibit 11.

h. See Hawker Pacific Inc.'s Response to First EPA Request, Questions 1 and 2.

**12. Identify all leaks, spills, releases or threats of releases of any kind into the environment of any hazardous materials that have occurred or may occur at or from the facility. In addition, identify:**

See responses to Questions 5 and 7 above. Without determining or conceding that the materials involved are hazardous as defined, Hawker Pacific states that it has certain air emissions from permitted equipment or from activities exempt from permitting by the South Coast Air Quality Management District. Hawker Pacific will provide additional information on such air emissions upon request.

**13. If any releases or threatened release identified in response to Question 12, above, occurred into any subsurface disposal system, floor drain, sump, or dry well inside or under any buildings located on the facility, further identify:**

- a. Precisely where the disposal system, floor drain, sump, or dry well is and was located;
- b. When the disposal system, floor drain, sump, or dry well was installed;

- c. Whether the disposal system, floor drain, sump, or dry well was connected to pipes;
- d. Where such pipes are or were located, describing the location(s) and providing a map or diagram of such location(s);
- e. When such pipes were installed;
- f. How and when such pipes were replaced, repaired, or otherwise changed.

See responses to Questions 5 and 7 above.

14. Is the facility currently connected to a sewer line? If so, identify the sewage system, date of connection, and type of wastes discharged. If you are or at some time operated the facility without a sewer line connection, identify the method of waste disposal that you use or did use. Specifically, have you or are you using leach field(s), septic tank(s), or any other method of disposal at the facility. Provide copies of any sewer permits, including but not limited to industrial waste permits.

Buildings 1, 2 and 5 of the facility are connected to a sewer line. See sewer permit submitted herewith as Exhibit 12. Buildings 3 and 4 have septic tank systems with leach fields for their sanitary sewage discharges.

15. Describe any acts or omissions of any persons, other than your employees, agents, or those persons with whom you had a contractual relationship, that may have caused

the release or threat of release of hazardous substances at the facility and damages relating therefrom and identify such persons. In addition:

- a. Describe all precautions that you took against foreseeable acts or omissions of any such third parties, and the consequence that could foreseeably result from such acts or omissions;
- b. Describe the care you exercised with respect to the hazardous substances found at the facility.

See response to Question 5 above.

16. Identify all liability insurance policies held by Respondent from the time Respondent began operations at, assumed ownership of, or began leasing the facility (whichever occurred earlier) until the present. In identifying such policies, state:

- a. The name and address of each insurer and of the insured;
- b. The amount of coverage under each policy;
- c. The commencement and expiration dates for each policy;

In addition, submit a complete copy of each policy.

Copies of insurance policies are submitted herewith as Exhibits 13 - 17. These policies are confidential and proprietary under 42 U.S.C. § 9604(e)(7)(E) and (F) and are enclosed in separate envelopes so marked.

- a. Name and address of insurance company: Chubb  
Group of Insurance Companies, 15 Mountain View  
Road, Warren, New Jersey 07060.
- b. See policies submitted herewith.
- c. Insurance coverages commenced at the date of HPI's  
acquisition on April 1, 1987 and renew annually on  
October 1.

**17. Provide copies of all income tax returns including all  
schedules sent by you to the federal Internal Revenue  
Service in the last five years.**

Copies of the 1988 and 1989 Federal Income Tax Returns  
are submitted herewith as Exhibits 18 and 19. These  
returns are confidential and proprietary under 42  
U.S.C. § 9604(e)(7)(E) and (F) and are enclosed in  
separate envelopes so marked.

**18. Provide all financial statements for the past five  
fiscal years, including but not limited to those filed  
with the federal Internal Revenue Service, the Franchise  
Tax Board, any other state taxing authorities, and the  
Securities and Exchange Commission.**

Copies of the 1988, 1989 and 1990 Annual Reports of  
Hawker Siddeley are submitted herewith as Exhibits 20 -  
22. Copies of 1989 Financial Statements for Hawker  
Pacific are submitted herewith as Exhibit 23. Hawker  
Pacific has no audited financial statements for 1988 or  
1990.) These financial statements are confidential and

proprietary under 42 U.S.C. § 9604(e)(7)(E) and (F) and are enclosed in separate envelopes so marked.

- 19. Identify all of Respondent's current assets and liabilities.**

See response to Question 18 above.

- 20. Identify all subsidiaries and parent corporations of Respondent.**

HPI is a wholly-owned subsidiary of Hawker Pacific Pty Ltd (Australia) which in turn is a wholly-owned subsidiary of Hawker Siddeley Group PLC (UK).

- 21. Provide a copy of the most current Articles of Incorporation and By-laws of Respondent.**

Copies of the Articles of Incorporation and By-laws are submitted herewith as Exhibits 24 and 25.

- 22. Identify the managers and majority shareholders or partners of Respondent and the nature of their management duties or amount of shares held, respectively.**

As to shareholders, see response to Question 20 above.

As to managers, Hawker Pacific has a number of salaried employees who might be considered management. The primary management personnel for the site are:

David L. Lokken, Executive Vice President and Chief Operating Officer, responsible for the overall day-to-day management; Jeff B. Belzer, Vice President Finance and Administration, responsible for the financial and




administrative requirements of the company; Robert D. Griswell, Vice President Commercial Operations responsible for factory operations as well as sales and marketing.

Dated: June 14, 1991

Respectfully submitted,

MICHAEL A. MONAHAN  
GIBSON, DUNN & CRUTCHER

By:

  
MICHAEL A. MONAHAN  
Attorneys for HAWKER PACIFIC  
INC.

2825u

LA911630.016

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Attorneys for  
HAWKER PACIFIC INC.

BEFORE THE  
UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY

In re Hawker Pacific, Inc.,	)	
facility at 11310 Sherman	)	EPA Reference T-4-1
Way, Sun Valley, California;	)	
San Fernando Valley	)	
Groundwater Investigation	)	
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RESPONSE OF HAWKER PACIFIC INC.  
TO REQUEST FOR INFORMATION  
PURSUANT TO 42 U.S.C. § 9604(e)

H011215

RESPONSE OF HAWKER PACIFIC INC.  
TO REQUEST FOR INFORMATION  
PURSUANT TO 42 U.S.C. § 9604(e)

This response is made by Hawker Pacific Inc. ("Hawker Pacific") to the request for information under 42 U.S.C. §§ 9604 and 6907 made by the United States Environmental Protection Agency ("EPA") by letter dated February 1989, addressed to Robert E. (Bob) Wilson, regarding Hawker Pacific's facility at 11310 Sherman Way, Sun Valley, California 91352. This response does not constitute any admission by Hawker Pacific that it has contributed to or is responsible for the San Fernando Valley groundwater contamination referred to in the EPA's request, and Hawker Pacific denies any such contribution or responsibility.

The following sets forth each question in the EPA request, followed by Hawker Pacific's response thereto.

1. A description of the purpose and operations of your facility including a detailed description of any hazardous waste storage, treatment, or disposal operations. Include the dates of operation.

**Response:**

Hawker Pacific overhauls and repairs, and manufactures, aircraft landing gear and flight control equipment at this facility. It has conducted operations at the site since April 1, 1987, when it purchased assets for that purpose from Inchcape PLC. At that time, its facility included Buildings 1 through 4

(see Response to Request No. 3, below). In December 1987, its facility was expanded to include Building No. 5.

Hawker Pacific's operations at the site consist of receiving and inspection of material and equipment, machining and grinding, plating, painting, assembly and testing of new and reassembled equipment.

Operations at the site generate the following waste streams:

1. Plating shop wastes: (a) Plating shop production trash consisting of tape and masking materials is collected in steel drums. (b) Spent plating baths are periodically pumped out of the equipment and absorbent is added to it in steel drums. (c) Plating tank sludge also is periodically pumped out and absorbent is added in steel drums. (d) Plating operations rinse water is directed to a clarifier tank prior to discharge to the publicly owned treatment works ("POTW"). Clarifier sludge is periodically pumped out, and dewatered using an onsite press. The sludge is placed in steel drums, and the water is returned to the clarifier tank. Steel drums of all these plating shop wastes are hauled offsite to a permitted disposal site.

2. Several other types of miscellaneous liquid wastes are generated by the equipment used at the site: machinery waste oil, water soluble coolant from metal-working machinery, magnetic particle oil used for product testing, spent hydraulic fluids, degreasing solvents and paint thinners and solvent. These liquids are collected in steel drums and shipped offsite for recycling or disposal.

Steel drums in which the waste is accumulated are stored temporarily in a paved storage compound in the yard at the facility. These operations and waste streams have remained essentially the same since Hawker-Pacific began operations at the facility.

2. A detailed description of all hazardous substances and hazardous wastes that were or are used or produced in operation or in production-related processes at your facility(s). Of particular importance is your information regarding past and present chlorinated solvent usage including but not limited to carbon tetrachloride (CTC), trichloroethylene (TCE), and tetrachloroethylene (PCE). For each substance and each waste used or generated, provide the following information.
  - a. The common chemical name, specific chemical name, and chemical composition by volume for liquids and weight for solids;
  - b. The total amount, in gallons for liquids and tons for solids, or annual usage or generation;
  - c. The methods and processes used to generate, store, treat, and dispose of, and otherwise handle each substance;
  - d. When and where the above processes occurred and are occurring. Please specify dates and locations as precisely as possible. Location information should include, but not limited to, information pertaining to tanks, ponds, treatment facilities, and other units which were historically used to treat, store and/or dispose of hazardous substances but which may no longer exist.

**Response:**

The following is a list of the hazardous materials used, stored, or produced at this site:

Liquid Wastes:

Shell Tellus Oil

Hydrocarbon Mixture 99%

55 Gallons a Year Usage

Used for lubricating machinery in the machine shop areas in Buildings 1 and 2.

Disposed of by recycling off-site

Shell Garia Oil-C-  
Hydrocarbon Mixture 99%  
50 gallons a year usage  
Used for lubricating machinery in the machine shop areas in  
Buildings 1 and 2  
Recycled off-site

Trichloroethane  
Trichloroethane 1.1.1. 100%  
600 Gallons a Year Usage  
Used for degreasing machined parts in the plating shop area in  
Building 2  
Recycled off-site

Red Oil  
Hydraulic Fluid H-5606  
Mixture 99% CAS# 64742-46-2, 64741-97-5, 64742-53-6  
250 gallons a year usage  
Used to fill and test hydraulic units before shipment, in the  
test room in Building 3  
Disposed of by recycling off-site

Methylene Chloride  
Methylene Chloride 100% CAS# 75-09-2  
50 gallons a year usage  
Used in assembly of the components in the assembly department in  
Building 3  
Recycled off-site

Rho-Solv 1204  
Rho-Solv 1204 100% CAS# 64742-89-8  
1200 gallons a year usage  
Used to clean parts and machinery in Buildings 2, 3 and 4  
Recycled off-site

✓ Mag-Oil-C  
Deodorized Kerosene 96% Parafins, 2% Benzene  
200 gallons a year usage  
Used in magnetic particle inspection equipment in solvent tanks  
in NDT (non-destructive testing) Department in Building 2  
Recycled off-site

Rubbing Alcohol  
Isopropyl Alcohol  
60 gallons a year usage  
Used to clean hydraulic equipment during assembly process in  
Building 3  
Recycled off-site

**Chase 310**

Lacquer Thinner 22% Toluene, 50% Ketone, 5% Glycolethers, 22% Petroleum Hydrocarbons

150 gallons usage

Used for cleaning parts to be painted, paint gun cleanup and thinning of paints in Building 4

Recycled off-site

**MEK**

Methyl Ethyl Ketone 100% CASE# 78-93-3

70 gallons a year usage

Used for cleaning parts in plating and assembly and test departments in Buildings 2 and 3

Recycled off-site

**Water Soluble Coolant**

Waste Oil and Water

3000 gallons a year usage

Used for cooling during grinding and metal working in machine shop areas in Buildings 1 and 2

Recycled off-site

**Solid Wastes:**

**Cyanide/Cadmium Waste**

3/4 cubic yards a year

Plating tank sludge, spent plating solution in plating shop in Building 2

Land fill disposal

**Nickel Waste**

3/4 cubic yards a year

Plating tank sludge, spent plating solution in plating shop in Building 2

Land fill disposal

**Chromium Waste**

7 cubic yards a year

Plating tank sludge, spent plating solution in plating shop in Building 2

Recycled off-site

**Metal Hydroxide Waste**

2 cubic yards a year

Waste water treatment solids from the treating of metal finishing rinse water

Recycled off-site

**Oil and Grease Waste**

3/4 cubic yards a year

Residue from oil product drums, from storage tank for water soluble coolant in yard storage

Recycled off-site

**Production Trash:**

**Masking Tape and Materials**

From Building 2 plating shop as described in response to request No. 1 above

**Land Fill Disposal**

All of the materials referred to above are used in and handled by machinery, vessels, other equipment, piping or drums (both before and after becoming waste or recyclable materials) located above concrete or paved floors or pads so that any liquid leak or release would be promptly visible, with two exceptions: The plating waste water clarifier tank in Building 2 is partially below grade, and hydraulic fluid (red oil) and related compressor oil drips used for testing equipment are captured with compressor condensate water in two small sumps (approx. 18" x 18" x 18" each) located next to each other outside Building 3. A sample boring has been placed in the location of the plating clarifier. (See Response to Request No. 8.) The integrity of the two small sumps is and has been readily ascertained by visual inspection.

3. Any photographs, maps, diagrams regardless of their date, which show areas where hazardous substances or hazardous wastes have been made or may be located.

**Response:**

See enclosed facility diagram, document "A".



4. A description of past and present disposal practices of hazardous substances and hazardous wastes generated or used at your facility. If off-site disposal of wastes has occurred, please provide a detailed description, including copies of manifests of hazardous substances and hazardous wastes, the names and addresses of transporters that have ever been engaged for the purpose of transporting hazardous substances or hazardous wastes from your facility, and the location to where the waste was hauled.

**Response:**

See responses to Requests 1 and 2, above. Hawker Pacific's past and present hazardous waste disposal practices are: All hazardous substances for disposal are profiled (sampled and analyzed), packaged and transported by an approved transporter to a disposal site or recycler that is authorized to accept that substance.

Enclosed are copies of manifests covering from 1987 to present date, document nos. HP000001 - HP000042.

**Transporters used:**

Disposal Control Inc.  
1369 W. 9th Street  
Upland, CA 91786

King & King Drain Oil Service  
635 Obispo  
Long Beach, CA 90814

Locations to which materials were hauled are shown on the manifests.

5. Locations and detailed descriptions of all monitoring wells, supply wells, injection wells, and underground tanks at your facility.

**Response:**

One underground tank, which has not been used by Hawker Pacific, recently has been discovered at the back of Building 1,

between Buildings 1 and 2. (See diagram supplied in Response to Request No. 3.)

6. Is your facility(s) currently connected to a sewer line? If so, please identify the sewage system, date of connection, and types of wastes discharged. If you are or at some time operated your facility(s) without a sewer line connection, please identify the method of waste water disposal that you use or did use. Specifically, have you or are you using leach field(s), septic tank(s), or any other method of onsite disposal.

**Response:**

Site Buildings Nos. 1, 2, and 4 are connected to a POTW sewer line. Waste streams discharged into this sewer are biological waste, and plating rinse waters that have been pretreated as described in Response to Request No. 1, above. These sewer connections have been in place since Hawker Pacific began operations at these portions of the site in April 1987.

Buildings Nos. 3 and 5 are connected to septic tanks with leach lines. These have been in place since Hawker Pacific began operations at these portions of the site, in April and December 1987, respectively.

7. All analyses from sampling of monitoring and supply wells, underground tanks, soil samples, and soil-gas sampling conducted at your facility. Please include any reports written by consultant(s) about these sample analyses.

**Response:**

Pursuant to direction of the California Regional Water Quality Control Board, Los Angeles Region ("LARWQCB"), on December 1, 1988, Law Environmental Inc. performed a subsurface investigation at two locations on this site to determine if any

subsurface contamination to soil or ground water had occurred.

The report is produced herewith, document "B".

8. Are you or your consultants planning to perform any investigations of the soil, water (ground or surface), geology, geohydrology, or air quality on or about the site? If so, please describe the planned investigation(s).

Response:

Hawker Pacific has been requested by California Regional Water Quality Control Board to perform an additional two borings in the area of Building 3 and 5 to a depth of 40 feet as well as two borings inside Building 2 to a depth of 10 feet. Final results are not yet received. Air emissions testing was conducted February 13, 1989 by Truesdail Labs to determine total and hexavalent chrome from this facility's three hard chrome plating tanks.

9. A list of all current and former employees, agents, contractors, consultants, company officers, and other personnel who may possess knowledge or information relevant to this inquiry. This list should include each individual's name, address, telephone number, and job title or function.

Response:

<u>Name</u>	<u>Address &amp; Phone No.</u>	<u>Title</u>	<u>Term. Date</u>
Erik Johnson	FX-6: Personal Information [REDACTED]	Hazardous Waste/ Process Supervisor	
Harry Gunn	FX-6: Personal Information [REDACTED]	Machine Shop Supv.	
Bud Bailes	FX-6: Personal Information [REDACTED]	Plater Journeyman/ Lead	
Ed Conley	FX-6: Personal Information [REDACTED]		

<u>Name</u>	<u>Address &amp; Phone No.</u>	<u>Title</u>	<u>Term. Date</u>
Stan LaSalle	FX-6: Personal Information [REDACTED]	EPA/Hazardous Waste Engineer	3-4-88
Lewis Augustine	FX-6: Personal Information [REDACTED]	Supervisor Sr.	7-31-87

10. Length of time your company has been at the site location and any information you have regarding former occupants of this location and their hazardous waste practices.

**Response:**

Hawker Pacific has occupied this site from April 1, 1987, except it has occupied Building 5 since December 1987. Prior operators at the site excluding Building 5, based on information and belief, were:

Inchcape PLC.	6-1-82 to 4-1-87
Parker Corp.	Approx. 1980 to 6-1-82
Bertea	Approx. 1979-1980
Zero Corporation	Approx. 1977-1979
Canoga Industries	Approx. 1968-1977
Stellar Hydraulics	Approx. 1963-1969 (Buildings 1 and 2 only)

Some of these may not have occupied the entire site of Buildings 1 - 4.

The company occupying Building 5 immediately prior to Hawker Pacific was Laura Scudder. Hawker Pacific lacks information as to other prior occupants of Building 5.

11. Any information regarding use and disposal of chlorinated solvents by any person or business in the San Fernando Valley.

**Response:**

Hawker Pacific objects to this request as beyond the scope of EPA's authority. Without waiving this objection, Hawker Pacific produced herewith copies of manifests relating to prior operators at this location that Hawker Pacific possesses, as documents no. HP000043 - HP000128.

12. A descriptive list of all insurance policies held by your company. The description should include the dates during which each policy was in force, the general type of policy (e.g., comprehensive, general liability, automobile), the insurance company issuing the policy, the policy number, and any specific provision of the policy which may relate to claims for environmental damages.

**Response:**

See document entitled "Hawker Pacific Inc. Insurance Policy List, document "C", produced herewith in a separate envelope labelled as confidential information. This document and the information contained therein is confidential and subject to 40 C.F.R. § 2.203(b), and is to be so treated.

13. A detailed description of all hazardous substance and hazardous waste spills, leaks and incidents, as well as any clean-up actions undertaken during the history of your facility's operation.

**Response:**

No known spills, leaks or incidents during Hawker Pacific's operation at this location.

14. A list of the names and addresses of all solvent suppliers and solvent recyclers from which either products or services were acquired for use by your facility.

**Response:**

Rho-Chem Corp P.O. Box 6021 H25-Isis Ave. Inglewood, CA 90301	Supplier and recycler
--	-----------------------

PRI 1835 E. 29th Street Signal Hill, CA	Recycler
---	----------

DeMenno-Kerdoon 2000 N. Alameda Street Compton, CA 90222	Recycler
--	----------

Casmalia Resource Management NTU Road Casmalia, CA 93429	Recycler
--	----------

Shell Oil Co. 14117 Aetna Van Nuys, CA 91408	Supplier
--	----------

Holchem Chemical 13546 Desmond Street Pacoima, CA 913131	Supplier
--	----------

15. An audited set of financial statements which includes a Statement of Financial Position/Balance Sheet, Income Statement, and Statement of Changes in Working Capital, and any other supplementary information for your company's most recent fiscal year.

**Response:**

See financial statements, document "D", produced herewith in a separate envelope labelled as confidential information. This document and the information therein is confidential subject to 40 C.F.R. § 2.203(b), and is to be so treated.

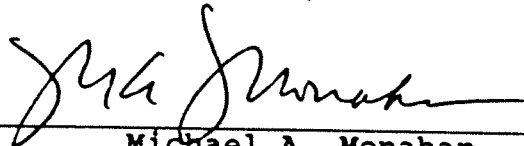
16. Are you owned by another corporate entity as a subsidiary, division, or otherwise?

Response:

Yes. See document produced in response to Request No.

DATE: JULY 7, 1989

RICHARD J. DENNEY  
MICHAEL A. MONAHAN  
LAURA J. CARROLL  
McCUTCHEN, BLACK, VERLEGER & SHEA

  
\_\_\_\_\_  
Michael A. Monahan

Attorneys for HAWKER PACIFIC INC.

I, Robert E. Wilson, Vice President and General Manager of  
Hawker Pacific Inc. (the "Company"), directed employees under my  
supervision in a search for records in the possession of the company and in  
interviewing company employees with knowledge of the company's operations,  
chemical use and business practices, for purposes of preparing the  
responses to which this is attached. I believe that the search and  
interviews were diligent and, based thereon, that the factual responses to  
which this is attached are correct.

DATE: July 7, 1989



ROBERT E. WILSON

SUBSCRIBED AND SWORN TO BEFORE ME  
THIS 7th DAY OF July, 1989.  
.....  
NOTARY PUBLIC  
Luis E. Zurita





**EXHIBITS TO RESPONSE OF HAWKER PACIFIC INC.  
TO EPA REQUEST FOR INFORMATION  
PURSUANT TO CERCLA § 104(e)  
(INCLUDING CONFIDENTIAL INFORMATION)**

**VOLUME I of II**

**Exhibits 1-12**

INDEX OF EXHIBITS TO RESPONSE OF HAWKER PACIFIC INC. TO EPA  
REQUEST FOR INFORMATION PURSUANT TO CERCLA § 104(e)  
(INCLUDING CONFIDENTIAL INFORMATION)

<u>Number</u>	<u>Description</u>
1.	Lease from Wagner and Bassinger to Hawker Pacific (Building 1, 2 and 3)
2.	Lease from Industrial Bowling to Hawker Pacific (Building 5).
3.	Lease from Industrial Bowling Corp. to Hawker Pacific
4.	Sealed map of facility.
5.	Law Environmental, Inc. Report (January 4, 1989).
6.	Law Environmental, Inc. Report (August 22, 1989).
7.	Law Environmental, Inc. Report (January 11, 1990).
8.	Law Environmental, Inc. Report (November 26, 1990).
9.	Law Environmental, Inc. Work Proposal (May 22, 1991).
10.	Material Safety Data Sheets
11.	Hazardous Waste Manifests
12.	Sewer Permit
13.	Insurance Policies (1986-1987).
14.	Insurance Policies (1987-1988).
15.	Insurance Policies (1988-1989).
16.	Insurance Policies (1989-1990).
17.	Insurance Policies (1990-1991).
18.	1988 Federal Tax Return.

19. 1989 Federal Tax Return.
20. 1988 Hawker Siddeley Annual Report.
21. 1989 Hawker Siddeley Annual Report.
22. 1990 Hawker Siddeley Annual Report.
23. 1989 Hawker Pacific Financial Statements.
24. Articles of Incorporation.
25. By-Laws.

LA911650.030

Bldgs 1, 2 & 3

LEASE BETWEEN  
GORDON N. WAGNER AND JOSEPH W. BASINGER  
AS LESSORS AND  
HAWKER PACIFIC, INC. AS LESSEE  
OF PROPERTY COMMONLY KNOWN AS  
11310 SHERMAN WAY, SUN VALLEY, CALIFORNIA

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## LEASE

1. PARTIES. This Lease, dated, for reference purposes only, March 26, 1987, is made by and between GORDON N. WAGNER and JOSEPH W. BASINGER ("Lessor") and HAWKER PACIFIC, INC., a California corporation ("Lessee").

2. PREMISES. Lessor hereby leases to Lessee and Lessee leases from Lessor for the term, at the rental, and upon all of the conditions set forth herein, that certain real property situated in the County of Los Angeles, State of California, commonly known as 11310 Sherman Way, Sun Valley, California 91352 and described as:

That portion of the east 100 feet of the west half of lot 62 of Lankershim Ranch Land and Water Company's subdivision of the east 12,000 acres of the south half of the Ranch X Mission of San Fernando, in the city of Los Angeles, county of Los Angeles, State of California as per map recorded in Book 31, Pages 39 seq. of miscellaneous records in the office of the City Recorder of said county line northerly of a line, extending south 89 degrees 4 feet 25 inches east from a point in the centerline of Tujunga Avenue, 50 feet wide distant north zero degrees 00 feet 30 inches west 406.44 feet from the intersection of said centerline of the westerly prolongation of the southerly line of said lot 62. Except therefrom the southerly 30 feet thereof.

3. TERM.

3.1. Term. The term of this Lease shall be for Ten (10) years commencing on April 1, 1987 and ending on March 31, 1997 unless sooner terminated pursuant to any provision hereof.

3.2. Delay in Commencement. Notwithstanding said commencement date, if for any reason Lessor cannot deliver possession of the Premises to Lessee on said date, Lessor shall not be subject to any liability therefor, nor shall such failure affect the validity of this Lease or the obligations of Lessee thereunder or extend the term hereof, but in such case Lessee shall not be obligated to pay rent until possession of the Premises is tendered to Lessee; provided, however, that if Lessor shall not have delivered possession of the Premises within sixty (60) days from said commencement date, Lessee may, at Lessee's option, by notice in writing to Lessor within ten (10) days thereafter, cancel this Lease, in which event the parties shall be discharged from all obligations hereunder. If Lessee occupies the Premises prior to said commencement date, such occupancy shall be subject to all provisions hereof, such occupancy shall not advance the termination date, and Lessee shall pay rent for such period at the initial monthly rates set forth below.

4. RENT.

4.1. Rent for First Five Years. Lessee shall pay to Lessor as rent for the Premises in accordance with the following schedule:

<u>Period</u>	<u>Annual Rent</u>	<u>Monthly Rent</u>
1. April 1, 1987 to March 31, 1988	\$204,000	\$17,000
2. April 1, 1988 to March 31, 1989	\$209,100	\$17,425
3. April 1, 1989 to March 31, 1990	\$229,305	\$19,108.75
4. April 1, 1990 to March 31, 1991	\$238,515	\$19,876.25
5. April 1, 1991 to March 31, 1992	\$247,200	\$20,600



4.2. Rent for Second Five Years. The annual rent shall be adjusted as of the first day of April of each year (the "Adjustment Date") beginning in the year 1992, according to the following computation:

The base for computing the adjustment is the index figure for the month of January, 1987 (the "Base Index"), as shown in the Consumer Price Index ("CPI") for all urban consumers for the Los Angeles area based on the year 1967 as published by the United States Department of Labor's Bureau of Labor Statistics. The Base Index, which is subject to verification, is 335.1.

If the CPI for all urban consumers for the Los Angeles area published for the month of January preceding the month of the Adjustment Date, ("Adjustment Index") has changed over the Base Index, the annual rent for the following one-year period (until the next rent adjustment) shall be set by multiplying the initial annual rent of Two Hundred Four Thousand Dollars (\$204,000) by a fraction, the numerator of which is the Adjustment Index and the denominator of which is the Base Index. If the amount of annual rental increase cannot be ascertained at the time it is effective, it shall be paid within thirty (30) days after the time such increase is determined and notice thereof mailed to Lessee at the Premises.

As an example, if the CPI for all urban consumers for the Los Angeles area for January 1992 is 475, then the Annual Rent for April 1, 1992 to March 31, 1993 would be \$289,167.41, calculated as follows:

$$\$204,000 \times 475/335.1 = \$289,167.41$$

Similarly, if the CPI for January 1993 is 500, the Annual Rent for April 1, 1993 to March 31, 1994 would be \$304,386.75, calculated as follows:

$$\$204,000 \times 500/335.1 = \$304,386.75.$$

In no event shall the annual rent for April 1, 1992 to March 31, 1993 be less than Two Hundred Fifty-Nine Thousand Five Hundred Sixty Dollars (\$259,560).

In no event shall the annual rent for April 1, 1993 to March 31, 1994 be increased by less than three percent (3%) of the annual rent for April 1, 1992 to March 31, 1993.

In no event shall the annual rent for April 1, 1994 to March 31, 1995 be increased by less than three percent (3%) of the annual rent for April 1, 1993 to March 31, 1994.

In no event shall the annual rent for April 1, 1995 to March 31, 1996 be increased by less than three percent (3%) of the annual rent for April 1, 1994 to March 31, 1995.

In no event shall the annual rent for April 1, 1996 to March 31, 1997 be increased by less than three percent (3%) of the annual rent for April 1, 1995 to March 31, 1996.

The index for the Adjustment Date shall be the one reported in the United States Department of Labor's newest comprehensive official index when in use and most nearly answering and the foregoing description of the index to be

used. If it is calculated from a base different from the base year 1967 used for the Base Index above, the base figure used for calculating the adjustment percentage shall first be converted under a formula supplied by the Bureau.

If the described index shall no longer be published, another generally recognized as authoritative shall be substituted by agreement of the Lessor and Lessee. If they are unable to agree within thirty (30) days after demand by either the Lessor or Lessee, the substitute index shall, on application of either party, be selected by the chief officer of the San Francisco Regional Office of the Bureau of Labor Statistics or its successor.

Rent for any period during the term hereof which is for less than one month shall be a pro rata portion of the monthly installment. Rent shall be payable in lawful money of the United States to Lessor at the address stated herein or to such other persons or at such other places as Lessor may designate in writing.

4.3. Monthly Rent Payments. Annual rent is payable in equal monthly installments, in advance, on the first day of each month of the period hereof. Lessee shall pay Lessor on April 1, 1987 or on the date this Lease is executed, whichever is later, \$17,000 as rent for the first month.

5. CONDITION TO ENFORCEABILITY. Flight Accessory Services, Inc. ("FAS") and HAWKER PACIFIC INC. ("HAWKER PACIFIC") have entered into a purchase and sales agreement (the "Agreement") dated February 25, 1987. The Agreement is

for the purchase by HAWKER PACIFIC of all trade, fixtures, equipment, inventory and supplies of FAS located at, among other places, the Premises which is the subject of this Lease. The enforceability of this Lease is conditioned on the consummation of the Agreement between HAWKER PACIFIC and FAS on March 30, 1987 or within sixty (60) days thereafter.

6. SECURITY DEPOSIT. Lessor currently holds Twenty-Five Thousand Three Hundred Sixty-Eight Dollars (\$25,368) as security deposit from FAS pursuant to a lease encompassing the Premises dated November 6, 1975 between GORDON N. WAGNER and JOSEPH W. BASINGER, Lessors, and Stellar Hydraulics Company, Lessee (the "Stellar Lease"). FAS is the assignee of the Stellar Lease.

HAWKER PACIFIC warrants that FAS has agreed to permit GORDON N. WAGNER and JOSEPH W. BASINGER to retain the \$25,368 as security deposit for HAWKER PACIFIC under this Lease.

Retention by Lessor of the \$25,368 from FAS under the Stellar Lease for the benefit of HAWKER PACIFIC under the present Lease does not obligate HAWKER PACIFIC to GORDON N. WAGNER or JOSEPH W. BASINGER, the lessors under the Stellar Lease, to any of FAS' liabilities, if any, under the Stellar Lease. When this Lease is terminated the security deposit will be returned to HAWKER PACIFIC in accordance with the provisions of this Lease.

HAWKER PACIFIC, as Lessee, however, acknowledges that FAS has made some changes to the structural facilities of the Premises which altered the Premises from its original

state as it existed when FAS first entered the Premises as assignee to the Stellar Lease. HAWKER PACIFIC agrees that, if demand is made by Lessor at the termination of this Lease, it shall restore the Premises to the original state that existed when FAS first entered the Premises.

If Lessee fails to pay rent or other charges due hereunder, or otherwise defaults with respect to any provision of this Lease, Lessor may use, apply or retain all or any portion of said deposit for the payment of any rent or other charge in default or for the payment of any other sum to which Lessor may become obligated by reason of Lessee's default, or to compensate Lessor for any loss or damage which Lessor may suffer thereby. If Lessor so uses or applies all or any portion of said deposit, Lessee shall within ten (10) days after written demand therefor deposit cash with Lessor in an amount sufficient to restore said deposit to the full amount hereinabove stated and Lessee's failure to do so shall be a material breach of this Lease. Lessor shall not be required to keep said deposit separate from its general accounts. If Lessee performs all of Lessee's obligations hereunder, said deposit, or so much thereof as has not theretofore been applied by Lessor, shall be returned, without payment of interest or other increment for its use, to Lessee (or, at Lessor's option, to the last assignee, if any, of Lessee's interest hereunder) at the expiration of the term hereof, and after Lessee has vacated the Premises.

7. USE.

7.1. Use. The Premises shall be used and occupied only for the manufacturing, storage and distribution of Lessee's products and related activities.

7.2. Compliance with Law. Lessee shall, at Lessee's expense, comply promptly with all applicable statutes, ordinances, rules, regulations, orders and requirements in effect during the term or any part of the term hereof regulating the use by Lessee of the Premises. Lessee shall not use or permit the use of the Premises in any manner that will tend to create waste or a nuisance or, if there shall be more than one tenant of the building containing the Premises, which shall tend to disturb such other tenants.

7.3. Condition of Premises. Lessee hereby accepts the Premises in their condition existing as of the date of the commencement hereof, subject to all applicable zoning, municipal, county and state laws, ordinances and regulations governing and regulating the use of the Premises, and accepts this Lease subject thereto and to all matters disclosed hereby and by any exhibits attached hereto. Lessee acknowledges that neither Lessor nor Lessor's agent has made any representation or warranty as to the suitability of the Premises for the conduct of Lessee's business.

8. MAINTENANCE, REPAIRS AND ALTERATIONS.

8.1. Lessee's Obligations. Lessee shall during the term of this Lease keep in good order, condition and repair, the Premises and every part thereof, structural or

non-structural, and all adjacent sidewalks, landscaping, driveways, parking lots, fences and signs located in the areas which are adjacent to and included with the Premises. Lessor shall incur no expense nor have any obligation of any kind whatsoever in connection with maintenance of the Premises, and Lessee expressly waives the benefits of any statute now or hereafter in effect which would otherwise afford Lessee the right to make repairs at Lessor's expense or to terminate this Lease because of Lessor's failure to keep the Premises in good order, condition and repair.

8.2. Surrender. On the last day of the term hereof, or on any sooner termination, Lessee shall surrender the Premises to Lessor in the same condition as when received, broom clean, ordinary wear and tear excepted. Lessee shall repair any damage to the Premises occasioned by the removal of Lessee's trade fixtures, furnishings and equipment pursuant to Paragraph 8.4(c), which repair shall include the patching and filling of holes and repair of structural damage.

8.3. Lessor's Rights. If Lessee fails to perform Lessee's obligations under this Paragraph 8, Lessor may at its option (but shall not be required to) enter upon the Premises, after ten (10) days' prior written notice to Lessee, and put the same in good order, condition and repair, and the cost thereof together with interest thereon at the rate of ten percent (10%) per annum shall become due and payable as additional rental to Lessor together with Lessee's next rental installment.

#### 8.4. Alterations and Additions.

(a) Lessee shall not, without Lessor's prior written consent, make any alterations, improvements, additions, utility installations in, on or about the Premises, except for non-structural alterations not exceeding One Thousand Dollars (\$1,000) in cost. As used in this Paragraph 8.4, the term "utility installations" shall include bus ducting, power panels, fluorescent fixtures, space heaters, conduits and wiring. As a condition to giving such consent, Lessor may require that Lessee agree to remove any such alterations, improvements, additions or utility installations at the expiration of the term, and to restore the Premises to their prior condition. As a further condition to giving such consent, Lessor may require Lessee to provide Lessor, at Lessee's sole cost and expense, a lien and completion bond in an amount equal to one and one-half (1-1/2) times the estimated cost of such improvements, to insure Lessor against any liability for mechanics' and materialmen's liens and to insure completion of the work.

(b) Lessee shall pay, when due, all claims for labor or materials furnished or alleged to have been furnished to or for Lessee at or for use in the Premises, which claims are or may be secured by any mechanics' or materialmen's lien against the Premises or any interest therein. Lessee shall give Lessor not less than ten (10) days' notice prior to the commencement of any work in the Premises, and Lessor shall have the right to post notices of non-responsibility in or on the Premises as provided by law.



(c) Unless Lessor requires their removal as set forth in Paragraph 8.4(a), all alterations, improvements, additions, and utility installations (whether or not such utility installations constitute fixtures of Lessee), which may be made on the Premises, shall become the property of Lessor and remain upon and be surrendered with the Premises at the expiration of the term. Notwithstanding the provisions of this Paragraph 8.4(c), Lessee's machinery and equipment, other than that which is affixed to the Premises so that it cannot be removed without material damage to the Premises, shall remain the property of Lessee and may be removed by Lessee subject to the provisions of Paragraph 8.2.

9. INSURANCE; INDEMNITY.

9.1. Insuring Party. As used in this Paragraph 9, the term "insuring party" shall mean the party who has the obligation to obtain the insurance required hereunder. The insuring party in this case shall be designated following the signatures of the parties below. Whether the insuring party is the Lessor or the Lessee, Lessee shall, as additional rent for the Premises, pay the cost of all insurance required hereunder. If Lessor is the insuring party Lessee shall, within ten (10) days following demand by Lessor, reimburse Lessor for the cost of the insurance so obtained.

9.2. Liability Insurance. The insuring party shall obtain and keep in force during the term of this Lease a policy of comprehensive public liability insurance insuring Lessor and Lessee against any liability arising out

of the ownership, use, occupancy or maintenance of the Premises and all areas appurtenant thereto. Such insurance shall be in an amount of not less than Three Hundred Thousand Dollars (\$300,000) for injury to or death of one person in any one accident or occurrence and in an amount of not less than Five Hundred Thousand Dollars (\$500,000) for injury to or death of more than one person in any one accident or occurrence. Such insurance shall further insure Lessor and Lessee against liability for property damage of at least Fifty Thousand Dollars (\$50,000). The limits of said insurance shall not, however, limit the liability of Lessee hereunder. In the event that the Premises constitute a part of a larger property said insurance shall have a Lessor's Protective Liability endorsement attached thereto. If the insuring party shall fail to procure and maintain said insurance the other party may, but shall not be required to, procure and maintain the same, but at the expense of Lessee.

9.3. Property Insurance. The insuring party shall obtain and keep in force during the term of this Lease a policy or policies of insurance covering loss or damage to the Premises, in the amount of the full replacement value thereof, against all perils included within the classification of fire, extended coverage, vandalism, malicious mischief, special extended perils (all risk) and sprinkler leakage. Said insurance shall provide for payment of loss thereunder to Lessor or to the holder of a first mortgage or deed of trust on the Premises. The insuring party shall, in

addition, obtain and keep in force during the term of this Lease a policy of rental income insurance covering a period of six (6) months, with loss payable to Lessor. If the insuring party shall fail to procure and maintain said insurance the other party may, but shall not be required to, procure and maintain the same, but at the expense of Lessee. Lessor and Lessee shall agree in writing each year as to the insurable value of the Premises leased herein.

9.4. Insurance Policies. Insurance required hereunder shall be in companies rated AAA or better in "Best's Insurance Guide." The insuring party shall deliver to the other party copies of policies of such insurance or certificates evidencing the existence and amounts of such insurance with loss payable clauses satisfactory to Lessor. No such policy shall be cancellable or subject to reduction of coverage or other modification except after ten (10) days' prior written notice to Lessor. If Lessee is the insuring party Lessee shall, within ten (10) days prior to the expiration of such policies, furnish Lessor with renewals or "binders" thereof, or Lessor may order such insurance and charge the cost thereof to Lessee, which amount shall be payable by Lessee upon demand. Lessee shall not do or permit to be done anything which shall invalidate the insurance policies referred to in Paragraph 9.3. If Lessee does or permits to be done anything which shall increase the cost of the insurance policies referred to in Paragraph 9.3, then Lessee shall forthwith upon Lessor's demand reimburse Lessor for any additional premiums attrib-

utable to any act or omission or operation of Lessee causing such increase in the cost of insurance. If Lessor is the insuring party, and if the insurance policies maintained hereunder cover other improvements in addition to the Premises, Lessor shall deliver to Lessee a written statement setting forth the amount of any such insurance cost increase and showing in reasonable detail the manner in which it has been computed.

9.5. Waiver of Subrogation. Lessee and Lessor each hereby waive any and all rights of recovery against the other, or against the officers, employees, agents and representatives of the other, for loss of or damage to such waiving party or its property or the property of others under its control to the extent that such loss or damage is insured against under any insurance policy in force at the time of such loss or damage. The insuring party shall, upon obtaining the policies of insurance required hereunder, give notice to the insurance carrier or carriers that the foregoing mutual waiver of subrogation is contained in this Lease.

9.6. Indemnity. Lessee shall indemnify and hold harmless Lessor from and against any and all claims arising from Lessee's use of the Premises, or from the conduct of Lessee's business or from any activity, work or things done, permitted or suffered by Lessee in or about the Premises or elsewhere and shall further indemnify and hold harmless Lessor from and against any and all claims arising from any breach or default in the performance of any obligation on

Lessee's part to be performed, under the terms of this Lease, or arising from any negligence of the Lessee, or any of Lessee's agents, contractors, or employees, and from and against all costs, attorney's fees, expenses and liabilities incurred in the defense of any such claim or any action or proceeding brought thereon; and in case any action or proceeding be brought against Lessor by reason of any such claim, Lessee upon notice from Lessor shall defend the same at Lessee's expense. Lessee, as a material part of the consideration to Lessor, hereby assumes all risk of damage to property or injury to persons, in, upon or about the Premises arising from any cause and Lessee hereby waives all claims in respect thereof against Lessor.

9.7. Exemption of Lessor from Liability. Lessee hereby agrees that Lessor shall not be liable for injury to Lessee's business or any loss of income therefrom or for the damage to the goods, wares, merchandise or other property of Lessee, Lessee's employees, invitees, customers, or any other person in or about the Premises, nor shall Lessor be liable for injury to the person of Lessee, Lessee's employees, agents or contractors, whether such damage or injury is caused by or results from fire, steam, electricity, gas, water or rain, or from the breakage, leakage, obstruction or other defects of pipes, sprinklers, wires, appliances, plumbing, air conditioning or lighting fixtures, or from any other cause, whether the said damage or injury results from conditions arising upon the Premises or upon other portions of the building of which the Premises are a part, or from

other sources or places, and regardless of whether the cause of such damage or injury or the means of repairing the same is inaccessible to Lessee. Lessor shall not be liable for any damages arising from any act or neglect of any other tenant, if any, of the building in which the Premises are located.

10. DAMAGE OR DESTRUCTION.

10.1. Partial Damage--Insured. Subject to the provisions of Paragraph 10.4, if the Premises are damaged and such damage was caused by a casualty covered under an insurance policy required to be maintained pursuant to Paragraph 9.3, Lessor shall at Lessor's expense repair such damage as soon as reasonably possible and this Lease shall continue in full force and effect. Notwithstanding the above, if the Lessee is the insuring party, and if the insurance proceeds received by Lessor are not sufficient to effect such repair, Lessor shall give notice to Lessee of the amount required in addition to the insurance proceeds to effect such repair. Lessee may, at Lessee's option, contribute the required amount, but upon failure to do so within thirty (30) days following such notice, Lessor's sole remedy shall be, at Lessor's option and with no liability to Lessee, to cancel and terminate this lease. If Lessee shall contribute such amount to Lessor within said thirty (30) day period, Lessor shall make such repairs as soon as reasonably possible and this Lease shall continue in full force and effect. Lessee shall in no event have any right to reimbursement for any such amount so contributed.

10.2. Partial Damage--Uninsured. Subject to the provisions of Paragraph 10.4, if at any time during the term hereof the Premises are damaged, except by a negligent or willful act of Lessee, and such damage was caused by a casualty not covered under an insurance policy required to be maintained pursuant to Paragraph 9.3. Lessor may at Lessor's option either (i) repair such damage as soon as reasonably possible at Lessor's expense, in which event this Lease shall continue in full force and effect, or (ii) give written notice to Lessee within thirty (30) days after the date of the occurrence of such damage of Lessor's intention to cancel and terminate this Lease as of the date of the occurrence of such damage. In the event Lessor elects to give such notice of Lessor's intention to cancel and terminate this Lease, Lessee shall have the right within ten (10) days after the receipt of such notice to give written notice to Lessor of Lessee's intention to repair such damage at Lessee's expense, without reimbursement from Lessor, in which event this Lease shall continue in full force and effect, and Lessee shall proceed to make such repairs as soon as reasonably possible. If Lessee does not give such notice within such ten (10) day period this Lease shall be cancelled and terminated as of the date of the occurrence of such damage.

10.3. Total Destruction. If at any time during the term hereof the Premises are totally destroyed from any cause whether or not covered by the insurance required to be maintained pursuant to Paragraph 9.3 (including any total

destruction required by any authorized public authority) this Lease shall automatically terminate as of the date of such total destruction.

10.4. Damage Near End of Term. If the Premises are partially destroyed or damaged during the last six (6) months of the term of this Lease, Lessor may at Lessor's option cancel and terminate this Lease as of the date of occurrence of such damage by giving written notice to Lessee of Lessor's election to do so within thirty (30) days after the date of occurrence of such damage.

10.5. Abatement of Rent; Lessee's Remedies.

(a) If the Premises are partially destroyed or damaged and Lessor or Lessee repairs or restores them pursuant to the provisions of this Article, the rent payable under Paragraph 4 for the period during which such damage, repair or restoration continues shall be abated in proportion to the degree to which Lessee's use of the Premises is impaired; provided, however, that the aggregate amount of abatement hereunder shall not exceed the total of rent payable under Paragraph 4 for a period of six (6) months. Except for abatement of rent, if any, Lessee shall have no claim against Lessor for any damage suffered by reason of any such damage, destruction, repair or restoration.

(b) If Lessor shall be obligated to repair or restore the Premises under the provisions of this Paragraph 9 and shall not commence such repair or restoration within ninety (90) days after such obligation shall accrue, Lessee may at Lessee's option cancel and terminate



this Lease by giving Lessor written notice of Lessee's election to do so at any time prior to the commencement of such repair or restoration. In such event this Lease shall terminate as of the date of such notice. Any abatement in rent shall be computed as provided in Paragraph 10.5(a).

10.6. Termination--Advance Payments. Upon termination of this Lease pursuant to this Paragraph 10, an equitable adjustment shall be made concerning advance rent and any advance payments made by Lessee to Lessor. Lessor shall, in addition, return to Lessee so much of Lessee's security deposit as has not theretofore been applied by Lessor.

11. REAL PROPERTY TAXES.

11.1. Payment of Taxes.

Lessee shall pay all real property taxes applicable to the Premises during the term of this Lease. All such payments shall be made at least ten (10) days prior to the delinquency date of such payment. Lessee shall promptly furnish Lessor with satisfactory evidence that such taxes have been paid. If any such taxes paid by Lessee shall cover any period of time prior to or after the expiration of the term hereof, Lessee's share of such taxes shall be equitably prorated to cover only the period of time within the tax fiscal year during which this Lease shall be in effect, and Lessor shall reimburse Lessee to the extent required. If Lessee shall fail to pay any such taxes, Lessor shall have the right to pay the same, in which case Lessee shall repay such amount to Lessor with Lessee's next rent installment

together with interest at the rate of ten percent (10%) per annum.

11.2. Definition of "Real Property" Tax. As used herein, the term "real property tax" shall include any form of assessment, license fee, commercial rental tax, levy, penalty, or tax (other than inheritance or estate taxes), imposed by any authority having the direct or indirect power to tax, including any city, county, state or federal government, or any school, agricultural, lighting, drainage or other improvement district thereof, as against any legal or equitable interest of Lessor in the Premises or in the real property of which the Premises are a part, as against Lessor's right to rent or other income therefrom, or as against Lessor's business of leasing the Premises.

11.3. Joint Assessment. If the Premises are not separately assessed, Lessee's liability shall be an equitable proportion of the real property taxes for all of the land and improvements included within the tax parcel assessed, such proportion to be determined by Lessor from the respective valuations assigned in the assessor's work sheets or such other information as may be reasonably available. Lessor's reasonable determination thereof, in good faith, shall be conclusive.

11.4. Personal Property Taxes. Lessee shall pay prior to delinquency all taxes assessed against and levied upon trade fixtures, furnishings, equipment and all other personal property of Lessee contained in the Premises or elsewhere. When possible, Lessee shall cause said trade

fixtures, furnishings, equipment and all other personal property to be assessed and billed separately from the real property of Lessor.

12. UTILITIES. Lessee shall pay for all water, gas, heat, light, power, telephone and other utilities and services supplied to the Premises, together with any taxes thereon. If any such services are not separately metered to Lessee, Lessee shall pay a reasonable proportion to be determined by Lessor of all charges jointly metered with other premises.

13. ASSIGNMENT AND SUBLETTING.

13.1. Lessor's Consent Required. Lessee shall not voluntarily or by operation of law assign, transfer, mortgage, sublet, or otherwise transfer or encumber all or any part of Lessee's interest in this Lease or in the Premises, without Lessor's prior written consent, which Lessor shall not unreasonably withhold. Any attempted assignment, transfer, mortgage, encumbrance or subletting without such consent shall be void, and shall constitute a breach of this Lease.

13.2. No Release of Lessee. Regardless of Lessor's consent, no subletting or assignment shall release Lessee of Lessee's obligation or alter the primary liability of Lessee to pay the rent and to perform all other obligations to be performed by Lessee hereunder. The acceptance of rent by Lessor from any other person shall not be deemed to be a waiver by Lessor of any provision hereof. Consent

to one assignment or subletting shall not be deemed consent to any subsequent assignment or subletting.

13.3. Attorney's Fees. In the event that Lessor shall consent to a sublease or assignment under Paragraph 12.1, Lessee shall pay Lessor's reasonable attorneys' fees not to exceed Five One Hundred Dollars (\$500) incurred in connection with giving such consent.

14. DEFAULTS; REMEDIES.

14.1. Defaults. The occurrence of any one or more of the following events shall constitute a material default and breach of this Lease by Lessee:

(a) The vacating or abandonment of the Premises by Lessee.

(b) The failure by Lessee to make any payment of rent or any other payment required to be made by Lessee hereunder, as and when due, where such failure shall continue for a period of three days after written notice thereof from Lessor to Lessee.

(c) The failure by Lessee to observe or perform any of the covenants, conditions or provisions of this Lease to be observed or performed by Lessee, other than described in paragraph (b) above, where such failure shall continue for a period of thirty (30) days after written notice hereof from Lessor to Lessee; provided, however, that if the nature of Lessee's default is such that more than thirty (30) days are reasonably required for its cure, then Lessee shall not be deemed to be in default if Lessee commenced such cure

within said thirty (30) day period and thereafter diligently prosecutes such cure to completion.

(d) (i) The making by Lessee of any general assignment, or general arrangement for the benefit of creditors; (ii) the filing by or against Lessee of a petition to have Lessee adjudged a bankrupt or a petition for reorganization or arrangement under any law relating to bankruptcy (unless, in the case of a petition filed against Lessee, the same is dismissed within sixty (60) days); (iii) the appointment of a trustee or receiver to take possession of substantially all of Lessee's assets located at the Premises or of Lessee's interest in this Lease, where possession is not restored to Lessee within thirty (30) days; or (iv) the attachment, execution or other judicial seizure of substantially all of Lessee's assets located at the Premises or of Lessee's interest in this Lease, where such seizure is not discharged within thirty (30) days.

14.2. Remedies. In the event of any such material default or breach by Lessee, Lessor may at any time thereafter, with or without notice or demand and without limiting Lessor in the exercise of any right or remedy which Lessor may have by reason of such default or breach:

(a) Terminate Lessee's right to possession of the Premises by any lawful means, in which case this Lease shall terminate and Lessee shall immediately surrender possession of the Premises to Lessor. In such event Lessor shall be entitled to recover from Lessee all damages incurred by Lessor by reason of Lessee's default including, but not

limited to, the cost of recovering possession of the Premises; expenses of reletting, including necessary renovation and alteration of the Premises, reasonable attorney's fees, and any real estate commission actually paid; the worth at the time of award by the court having jurisdiction thereof of the amount by which the unpaid rent for the balance of the term after the time of such award exceeds the amount of such rental loss for the same period that Lessee proves could be reasonably avoided; that portion of the leasing commission paid by Lessor pursuant to Paragraph 16 applicable to the unexpired term of this Lease. Unpaid installments of rent or other sums shall bear interest from the date due at the rate of ten percent (10%) per annum. In the event Lessee shall have abandoned the Premises, Lessor shall have the option of (i) retaking possession of the Premises and recovering from Lessee the amount specified in this Paragraph 14.2(a), or (ii) proceeding under Paragraph 14.2(b).

(b) Maintain Lessee's right to possession in which case this Lease shall continue in effect whether or not Lessee shall have abandoned the Premises. In such event Lessor shall be entitled to enforce all of Lessor's rights and remedies under this Lease, including the right to recover the rent as it becomes due hereunder.

(c) Pursue any other remedy now or hereafter available to Lessor under the laws or judicial decisions of the State of California.

14.3. Default by Lessor. Lessor shall not be in default unless Lessor fails to perform obligations required of Lessor within a reasonable time, but in no event later than thirty (30) days after written notice by Lessee to Lessor and to the holder of any first mortgage or deed of trust covering the Premises whose name and address shall have theretofore been furnished to Lessee in writing, specifying wherein Lessor has failed to perform such obligations; provided, however, that if the nature of Lessor's obligation is such that more than thirty (30) days are required for performance then Lessor shall not be in default if Lessor commences performance within such thirty (30) days period and thereafter diligently prosecutes the same to completion.

14.4. Late Charges. Lessee hereby acknowledges that late payment by Lessee to Lessor of rent and other sums due hereunder will cause Lessor to incur costs not contemplated by this Lease, the exact amount of which will be extremely difficult to ascertain. Such costs include, but are not limited to, processing and accounting charges, and late charges which may be imposed on Lessor by the terms of any mortgage or trust deed covering the Premises. Accordingly, if any installment of rent or any other sum due from Lessee shall not be received by Lessor or Lessor's designee within ten (10) days after such amount shall be due, Lessee shall pay to Lessor a late charge equal to ten percent (10%) of such overdue amount. The parties hereby agree that such late charge represents a fair and reasonable estimate of the

costs Lessor will incur by reason of late payment by Lessee. Acceptance of such late charge by Lessor shall in no event constitute a waiver of Lessee's default with respect to such overdue amount, nor prevent Lessor from exercising any of the other rights and remedies granted hereunder.

15. CONDEMNATION. If the Premises or any portion thereof are taken under the power of eminent domain, or sold under the threat of the exercise of said power (all of which are herein called "condemnation"), this Lease shall terminate as to the part so taken as of the date the condemning authority takes title or possession, whichever first occurs. If more than ten percent (10%) of the floor area of the improvements on the Premises, or more than twenty-five percent (25%) of the land area of the Premises which is not occupied by any improvements, is taken by condemnation, Lessee may, at Lessee's option, to be exercised in writing only within ten (10) days after Lessor shall have given Lessee written notice of such taking (or in the absence of such notice, within ten (10) days after the condemning authority shall have taken possession) terminate this Lease as of the date the condemning authority takes such possession. If Lessee does not terminate this Lease in accordance with the foregoing, this Lease shall remain in full force and effect as to the portion of the Premises remaining, except that the rent shall be reduced in the proportion that the floor area taken bears to the total floor area of the building situated on the Premises. Any award for the taking of all or any part of the Premises under the power of



eminent domain or any payment made under threat of the exercise of such power shall be the property of Lessor, whether such award shall be made as compensation for diminution in value of this leasehold or for the taking of the fee, or as severance damages; provided, however, that Lessee shall be entitled to any award for loss of or damage to Lessee's trade fixtures and removable personal property. In the event that this Lease is not terminated by reason of such condemnation, Lessor shall, to the extent of severance damages received by lessor in connection with such condemnation, repair any damages to the Premises caused by such condemnation except to the extent that Lessee has been reimbursed therefor by the condemning authority. Lessee shall pay any amount in excess of such severance damages required to complete such repair.

16. BROKER'S FEE. None.

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17. GENERAL PROVISIONS.

17.1. Estoppel Certificate.

(a) Lessee shall at any time upon not less than ten (10) days' prior written notice from Lessor execute, acknowledge and deliver to Lessor a statement in writing (i) certifying that this Lease is unmodified and in full force and effect (or, if modified, stating the nature of such modification and certifying that this Lease, as so modified, is in full force and effect) and the date to which the rent and other charges are paid in advance, if any, and (ii) acknowledging that there are not, to Lessee's knowledge, any uncured defaults on the part of Lessor hereunder, or specifying such defaults if any are claimed. Any such statement may be conclusively relied upon by any prospective purchaser or encumbrancer of the Premises.

(b) Lessee's failure to deliver such statement within such time shall be conclusive upon Lessee (i) that

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this Lease is in full force and effect, without modification except as may be represented by Lessor, (ii) that there are no uncured defaults in Lessor's performance, and (iii) that not more than one (1) month's rent has been paid in advance.

(c) If Lessor desire to finance or refinance the Premises, or any part thereof, Lessee hereby agrees to deliver to any lender designated by Lessor such financial statements of Lessee as may be reasonably required by such lender. Such statements shall include the past three (3) years' financial statements of Lessee. All such financial statements shall be received by Lessor in confidence and shall be used only for the purposes herein set forth.

17.2. Lessor's Liability. The term "Lessor" as used herein shall mean only the owner or owners at the time in question of the fee title or a lessee's interest in a ground lease of the Premises, and except as expressly provided in Paragraph 16, in the event of any transfer of such title or interest, Lessor herein named (and in case of any subsequent transfers the then grantor) shall be relieved from and after the date of such transfer of all liability as respects Lessor's obligations thereafter to be performed, provided that any funds in the hands of Lessor or the then grantor at the time of such transfer, in which Lessee has an interest, shall be delivered to the grantee. The obligations contained in this Lease to be performed by Lessor shall, subject as aforesaid, be binding on Lessor's successors and assigns, only during their respective periods of ownership.

17.3. Severability. The invalidity of any provision of this Lease as determined by a court of competent jurisdiction, shall in no way affect the validity of any other provision hereof.

17.4. Interest on Past-Due Obligations. Except as expressly herein provided, any amount due to Lessor not paid when due shall bear interest at ten percent (10%) per annum from the date due. Payment of such interest shall not excuse or cure any default by Lessee under this Lease.

17.5. Time of Essence. Time is of the essence.

17.6. Captions. Article and paragraph captions are not a part hereof.

17.7. Incorporation of Prior Agreements; Amendments. This Lease contains all agreements of the parties with respect to any matter mentioned herein. No prior agreement or understanding pertaining to any such matter shall be effective. This Lease may be modified in writing only, signed by the parties in interest at the time of the modification.

17.8: Notices. Any notice required or permitted to be given hereunder shall be in writing and may be served personally or by regular mail, addressed to Lessor and Lessee respectively at the addresses set forth after their signatures at the end of this Lease.

17.9. Waivers. No waiver by Lessor of any provision hereof shall be deemed a waiver of any other provision hereof or of any subsequent breach by Lessee of the same or any other provision. Lessor's consent to or

approval of any act shall not be deemed to render unnecessary the obtaining of Lessor's consent to or approval of any subsequent act by Lessee. The acceptance of rent hereunder by Lessor shall not be a waiver of any preceding breach by Lessee of any provision hereof, other than the failure of Lessee to pay the particular rent so accepted, regardless of Lessor's knowledge of such preceding breach at the time of acceptance of such rent.

17.10. Recording. Lessee may record this Lease or a "short form" memorandum of this Lease without Lessor's prior written consent. Either party shall, upon request of the other, execute, acknowledge and deliver to the other a "short form" memorandum of this Lease for recording purposes.

17.11. Holding Over. If Lessee remains in possession of the Premises or any part thereof after the expiration of the term hereof without the express written consent of Lessor, such occupancy shall be a tenancy from month to month at a rental in the amount of the last monthly rental plus all other charges payable hereunder, and upon all the terms hereof applicable to a month-to-month tenancy.

17.12. Cumulative Remedies. No remedy or election hereunder shall be deemed exclusive but shall, wherever possible, be cumulative with all other remedies at law or in equity.

17.13. Covenants and Conditions. Each provision of this Lease performable by Lessee shall be deemed both a covenant and a condition.

17.14. Binding Effect; Choice of Law. Subject to any provisions hereof restricting assignment or subletting by Lessee and subject to the provisions of Paragraph 17.2, this Lease shall bind the parties, their personal representatives, successors and assigns. This Lease shall be governed by the laws of the State of California.

17.15. This section intentionally left blank.

17.16. Attorney's Fees. If either party or the broker named herein brings an action to enforce the terms hereof or declare rights hereunder, the prevailing party in any such action, on trial or appeal, shall be entitled to his reasonable attorney's fees to be paid by the losing party as fixed by the court. The provisions of this paragraph shall inure to the benefit of the broker named herein who seeks to enforce a right hereunder.

17.17. Lessor's Access. Lessor and Lessor's agents shall have the right to enter the Premises at reasonable times for the purpose of inspecting the same, showing the same to prospective purchasers, or lenders, and making such alterations, repairs, improvements or additions to the Premises or to the building of which they are a part as Lessor may deem necessary or desirable. Lessor may at any time place on or about the Premises any ordinary "For Sale" signs and Lessor may at any time during the last one hundred twenty (120) days of the term hereof place on or about the Premises any ordinary "For Lease" signs, all without rebate of rent or liability to Lessee.

17.18. Signs and Auctions. Lessee shall not place any sign upon the Premises or conduct any auction thereon without Lessor's prior written consent.

17.19. Merger. The voluntary or other surrender of this Lease by Lessee, or a mutual cancellation thereof, shall not work a merger, and shall, at the option of Lessor, terminate all or any existing subtenancies or may, at the option of Lessor, operate as an assignment to Lessor of any or all of such subtenancies.

17.20. Corporate Authority. If Lessee is a corporation, each individual executing this Lease on behalf of said corporation represents and warrants that he is duly authorized to execute and deliver this Lease on behalf of said corporation, in accordance with a duly adopted resolution of the Board of Directors of said corporation or in accordance with the Bylaws of said corporation, and that this Lease is binding upon said corporation in accordance with its terms. If Lessee is a corporation Lessee shall, within thirty (30) days after execution of this Lease, deliver to Lessor a certified copy of a resolution of the Board of Directors of said corporation authorizing or ratifying the execution of this Lease.

18. OCCUPANCY BY LESSEE. Should Premises be ready for occupancy prior or subsequent to April 1, 1987, Lessee shall take possession of Premises within one (1) week after being advised by Lessor of Lessor's receipt of said Notice of Completion and the rent shall commence upon the first day of said possession. Should possession take place prior to the

first day of a month or after the first day of a month then  
rent shall be prorated on a daily basis to the first day of  
the next month thereafter and Lessee shall pay Lessor upon

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said possession said pro rata rent together with the next month's rent.

The parties hereto have executed this Lease at the place and on the dates specified immediately adjacent to their respective signatures.

Executed at LOS ANGELES  
CALIFORNIA

on March 30, 1987.  
Name and Address for  
service of notices and  
payment of rent:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

LESSOR:

By:

Gordon N. Wagner  
GORDON N. WAGNER

By:

Joseph W. Basinger  
JOSEPH W. BASINGER

Executed at Burbank, Cali-  
fornia on March \_\_, 1987.  
Address: 2721 Empire Avenue  
Burbank, CA 91504-3212

HAWKER PACIFIC, INC., LESSEE

By: \_\_\_\_\_

By: \_\_\_\_\_

345

BUSINESS PROPERTY LEASE

THIS AGREEMENT, made in duplicate this 23 day of March 1987  
by and between

INDUSTRIAL BOWLING CORP., a California Corporation,  
hereinafter referred to as "LESSOR"

and

HAWKER PACIFIC, INC.  
hereinafter referred to as "LESSEE"

WITNESSETH:

1. That the Lessor, in consideration of the sum of -----TEN-----

Dollars (\$ 10.00 ) to him in hand paid by the Lessee, the receipt of which is hereby acknowledged, hereby and upon the following terms and conditions, leases to the Lessee, and the Lessee hereby hires and takes from the Lessor, those certain premises in the City of Los Angeles, County of Los Angeles, State of California, more particularly described as follows: That portion of the West 1/2 of the East 1/2 (measured to center lines of adjoining streets) of Lots 62 of the Lukershin Ranch Land & Water Co. Subdivision in the City of Los Angeles, County of Los Angeles, State of California, as per map recorded in Bk. 31, pages 32 et seq. of Misc. Records in the office of County Recorder of said County, described as follows: beginning at a point on the westerly line of said one half 60.00 feet southerly of the intersection of the westerly line of said west one half with the southerly line of Sherman Way (formerly 9th St.) 50.00 feet wide as shown on said map, thence northerly along the westerly line of said west one half a distance of 330'; thence easterly parallel with the northerly line of said lot, a distance of 110.00 feet, thence southerly parallel with the westerly line of said west one half a distance of 330', thence westerly (\*) (\*) parallel with the northerly line of said lot a distance of 110.00 feet to the point of beginning. Together with an easement for ingress and egress over the northerly 289' of the easterly 30' of the westerly 110' of said one half.

More commonly known as 11260 1/2 Sherman Way, North Hollywood, California, (Back Metal Building)

of see below

Dollars (\$ ), for the full term aforesaid, payable in installments of: \$3,900.00 per month 4/1/87 through 7/31/87  
\$4,000.00 per month 8/1/87 through 9/30/89  
\*SEE ADDENDUM--RENT ESCALATIONS

Said payments shall be made in lawful money of the United States in advance, on the first day of each calendar month during said term, to Lessor or his agent, at such place in the County of Los Angeles as may be designated by the Lessor.

The first monthly installment shall be paid on the signing of this lease.

4. In addition to the rent hereinbefore reserved, the Lessee shall pay before delinquency all charges for water, gas, heat, electricity, power, refrigeration and any and all other services which may be used in or upon demised premises during the term of this lease, whether the same be charged or assessed at flat rates, measured by separate meters or pro rated. Should any such charge be payable by Lessee to Lessor and, after becoming due and payable, be and remain unpaid for five (5) days after presentation of bill therefore by Lessor to Lessee, the Lessor, in addition to any other remedy, at his option, may cause the discontinuance of such service to demised premises until such charge is fully paid and Lessor shall not be liable in any way for such discontinuance or any damage arising therefrom.

27052

5. The Lessee agrees to use the premises for the purpose of storage and or any lawful manufacturing purpose permitted in a M-2 zone in the City of Los Angeles.

together with such other uses as may be incidental thereto and for no other purpose without the written consent of the Lessor. The Lessee shall not use the premises nor permit the same to be used for any unlawful purpose and at all times shall maintain the same in a sanitary and orderly condition, and conform to all laws and ordinances, and all regulations of any governmental body appertaining and shall not do or permit any act or omission which will void or suspend any insurance policy covering the premises, nor do anything which will cause any increase in the fire hazard in said premises or the building of which same may be a part, without the written consent of the Lessor first had and obtained and in the event of any consent by Lessor, express or implied, all increase in insurance premiums by reason thereof shall be paid by the Lessee. No auctions, nuisances, nor anything which will be an unreasonable annoyance to adjoining tenants or which will injure the reputation of the premises shall be done or permitted. This lease and the leasehold estate created hereby are, and shall be subject and subordinate to any encumbrances, or extensions thereof, now covering the demised premises, or any part thereof, or encumbrances hereafter placed on the demised premises. Lessee shall execute any further instrument required by Lessor subordinating this lease to such encumbrances.

6. Should the Lessor in good faith be unable to deliver possession of demised premises at the time herein specified for the commencement of said term, this lease shall not be void or voidable and Lessor shall not be liable in damages to Lessee, but Lessor shall use due diligence to deliver said premises as soon as possible thereafter and in such event Lessee shall have no right of cancellation herein unless said premises are not so delivered within a reasonable time. Lessee shall be entitled to an appropriate credit on the rent reserved hereunder for such period as delivery cannot be made.

7. The Lessee covenants that his taking possession of the herein demised premises shall be an acceptance of the safety and condition thereof; that no representations not herein stated regarding the leased premises, have been made by Lessor or any other person in his behalf. Lessee, as a material part of the consideration to be rendered to the Lessor, hereby waives all claims against Lessor for damage to, or loss of, property in, upon or about said premises and for injuries to persons in or about said premises from any cause arising at any time, and Lessee agrees to hold and save Lessor harmless and indemnified from all loss, damage, liability, expense or injury to any person or to the property of any person arising from the neglect or use of the premises by Lessee or any third person. Any and all elevators or other equipment in or about the premises shall be operated solely at Lessee's risk, except such as are operated entirely by Lessor.

8. The Lessee at his cost shall keep every part of the premises, its equipment and appurtenances, including all exterior glass, in the same good condition or repair as they now are or may later be put by the Lessor, except as otherwise provided herein, ordinary use excepted. The Lessor shall not be called upon to make any repairs, alterations, improvements or additions in, to or about the premises, except as otherwise provided herein, and should Lessee fail to keep said premises properly repaired, Lessor may do so (but is not so obligated), and the cost of such repairs shall be paid by the Lessee with the next installment of and the same as rent due hereunder. The Lessee shall not place or maintain any sign, emblem, or other advertising matter of any kind on the exterior walls, grounds or roof or in or upon the windows or doors of the premises, without the written consent of the Lessor, and Lessor may remove any such sign which is maintained without such consent. The Lessee shall not make any change, alteration, or addition in or to the premises without the written consent of the Lessor first obtained, but this shall not prevent Lessee from installing trade fixtures and temporary office partitions, providing the same comply with all laws, ordinances and regulations applicable thereto, and the same may be removed at any time before the end of this lease, if the premises shall not be injured by such removal or provided that Lessee repairs any such injury; except, however, that any linoleum or other floor covering that has been glued to the floor shall be, and remain a part of the demised premises and shall not be removed at any time without the written consent of the Lessor. The Lessee agrees to save the Lessor harmless from and against all expenses, liens, claims, or damages to either property or person which may or might arise by reason of the making of any repairs, alterations, additions or improvements to the demised

premises, and further agrees to promptly remove any liens which may be filed or imposed against the demised premises. The Lessee on demand shall pay any increase in taxes paid by Lessor by reason of the assessment as improvements or additions and alterations made by Lessee and removable by him. The Lessee shall neither install nor maintain any machinery or apparatus, the weight or operation of which will tend to injure or be detrimental to the premises.

9. The Lessee shall not assign nor hypothecate this lease or the leasehold estate created hereby, nor sublet the whole or any part of the demised premises, without the written consent of the Lessor first had or obtained, and any attempt so to do shall be void and confer no rights on any third party, and shall be cause for cancellation of this lease by the Lessor at his option, and this provision against assignment, hypothecation and subletting shall be deemed to be a continuing covenant and apply not only to the Lessee herein, but to any and all sub-tenants, assignees and mortgagees of said leasehold premises or estate and to anyone who may in any manner acquire any interest therein. This lease shall not be assignable by operation of law. Should the Lessee abandon the premises or should any other person remain in possession thereof for five (5) consecutive days by virtue of any attachment or execution or through any bankruptcy or insolvency proceeding, or assignment for the benefit of creditors; or should Lessee default in any of his covenants or violate any of the provisions hereof, the Lessor at his option may re-enter and take possession of the premises and remove all persons and property therefrom and at his option terminate this lease, with or without due process of law, such process being expressly waived by Lessee. In the event that Lessor elects to re-enter and take possession of said premises but not to terminate this lease, Lessee agrees to pay Lessor on demand, the cost of recovering possession of said premises and cost of reletting, including the usual commissions, and also to pay monthly, on demand, any deficiency in the rent. It is agreed by the Lessor and the Lessee that if this lease shall be terminated by the Lessor by reason of any breach thereof by the Lessee, the Lessor shall thereupon be entitled to recover from the Lessee the worth at the time of such termination, of the excess, if any, of the amount of rent and charges equivalent to rent reserved in this lease for the balance of the term as provided in Paragraph 2 hereof, over the then reasonable rental value of the premises for the same period. The several rights and remedies herein granted to the Lessor shall be cumulative and in addition to any others he may be entitled to by law, and the exercise of one or more rights or remedies shall not impair Lessor's right to exercise any other right or remedy; and the Lessee hereby waives all claims for damages that may be caused by the action of Lessor under the provisions of this paragraph, and all claims for damages to, or loss of, property belonging to Lessee, or any other person, firm or corporation that may be in or upon the premises at the time.

10. Lessee shall pay all real and personal property taxes levied against the demised premises.

11. Lessee shall at all times during the term of this lease maintain and carry at Lessee's own cost and expense, liability insurance in insurance companies satisfactory to Lessor insuring the Lessee, the Lessor and the demised premises against damages or injuries to persons or property with limits of not less than \$500,000.00 for damage or injury to any one person and \$1,000,000.00 for damages or injuries to more than one person and for property damage in an amount not less than \$25,000.00. Lessee shall deposit copies of such insurance policies with Lessor upon request of Lessor. Lessee also to provide fire & extended coverage in the amount of \$300,000.00 and name Industrial Bowling Corp. as additional insured.

12. As security for the payment of the rent hereunder provided and for the payment of all monies provided hereunder to be paid by the Lessee, and for the faithful performance of all of the terms, covenants and conditions of this lease

on the part of the Lessee to be kept and performed, the Lessee has, upon the execution of this lease, deposited with the Lessor the sum of \$1,950.00 receipt of which is hereby acknowledged by the Lessor, which said sum Lessor shall hold as security without payment of interest thereon to Lessee. Upon the expiration date of the term of this lease or of any extension thereof or any sooner termination thereof, as herein provided, and provided at such time the Lessee be not in default in any of the terms and provisions of this lease, Lessor shall return to the Lessee the aforesaid sum of \$ 1,950.00 , deposited by the Lessee as security hereunder.

13. The Lessor reserves the right to enter the premises during reasonable business hours, for the purpose of inspection, exhibition, posting notices or supervising any necessary repairs. The Lessor may maintain such notices on the premises as may be necessary to protect him against loss from mechanics' liens or otherwise. The Lessor shall have the right to alter the said building, or add thereto, and for that purpose may erect scaffolding or other necessary or proper structures, and in such event Lessor shall not be liable to Lessee for any damage or inconvenience occasioned thereby; but any such work or alterations shall be made in such manner as to inconvenience said Lessee as little as possible.

14. In case Lessee holds over after the end of the term herein provided, with the express or implied consent of the Lessor, such tenancy shall be from month to month only, and not a renewal hereof, and the rent shall be at the rate of

\*The current rent amount on March 31, 1997..... Dollars (\$ . ), per month; subject, however to every other term, covenant and condition of this lease.

15. At the expiration or other termination of said term or of any extension or hold-over period thereof, the Lessee shall quit and deliver up possession of the premises unto the Lessor, in as good condition as upon delivery of possession to the Lessee, ordinary use thereof and damage by any of the contingencies mentioned in Paragraph Sixteen (16) hereof excepted. Immediately upon vacating said premises the Lessee shall remove all rubbish therefrom, and upon his failure so to do, the Lessor may do so, and the Lessee shall pay to Lessor, upon demand, the reasonable expense thereof.

16. Should the premises be so badly damaged by fire, earthquake, incidents of war, or other sudden violent action of the elements, as to render them wholly unfit for Lessee's occupancy and so that they cannot be restored with reasonable diligence within 90 working days after the commencement of actual work, then this lease may be terminated within the period of 30 days after such disaster, by either party, upon written notice to the other, whereupon Lessee shall surrender the premises and shall not be liable for any further rental, and Lessor shall refund any unearned rent paid in advance by Lessee, calculated at a daily rate, based on the regular monthly rental. Should this lease not be so terminated or in the event of any lesser damage by any such cause, the premises shall be restored with all reasonable speed by the Lessor at his expense, and the Lessee shall pay a reasonable rental during the period of such restoration for such part of the premises as shall be fit for occupancy by Lessee, and shall not be entitled to any damages for any loss occasioned by the injury to, or the destruction of said building or of Lessee's property; nor shall the rent be abated if Lessee is able to carry on his business as usual in the said premises.

17. Lessee will pay and indemnify Lessor against all legal costs and charges, including attorney's fees, reasonably incurred by Lessor in enforcing any covenant or agreement of this lease or in or about the defense or prosecution of any suit in discharging the said premises, or any part thereof, from any lien, judgment, or encumbrance caused or suffered by Lessee, or in any suit or proceeding against the Lessee in which the Lessor may be made a party by reason of being the owner of said demised premises. Whenever it shall be necessary for either party to give notice or present a bill to the other, respecting this lease, such notice or bill may be sent by registered mail, postage prepaid, addressed to the Lessor at:

1819 West Olive Avenue, Burbank, California 91506

or the Lessee at:

2921 Empire Avenue, Burbank, California

and such notice or presentation shall be deemed to be complete twenty-four hours after the same has been deposited in any United States Post Office, or mail box in the County of Los Angeles. This shall be a valid and sufficient service of notice for all purposes. The Lessor reserves the right for himself or his agents, during





**ADDENDUM TO  
STANDARD INDUSTRIAL LEASE**

**Dated** March 23, 1987

**By and Between** INDUSTRIAL BOWLING CORP.  
& HAWKER PACIFIC, INC.

20 **RENT ESCALATIONS**

(a) On October 1, 1989, April 1, 1992, October 1, 1994

the monthly rent payable under paragraph 4 of the attached Lease shall be adjusted by the increase, if any, from the date this Lease commenced, in the Consumer Price Index of the Bureau of Labor Statistics of the U.S. Department of Labor for Urban Wage Earners and Clerical Workers, Los Angeles-Long Beach-Anaheim, California (1967=100), "All Items", herein referred to as "C.P.I."

(b) The monthly rent payable in accordance with paragraph (a) of this Addendum shall be calculated as follows: the rent payable for the first month of the term of this Lease, as set forth in paragraph 4 of the attached Lease, shall be multiplied by a fraction the numerator of which shall be the C.P.I. of the calendar month during which the adjustment is to take effect, and the denominator of which shall be the C.P.I. for the calendar month in which the original Lease term commences. The sum so calculated shall constitute the new monthly rent hereunder, but in no event, shall such new monthly rent be less than the rent payable for the month immediately preceding the date for rent adjustment.

(c) Pending receipt of the required C.P.I. and determination of the actual adjustment, Lessee shall pay an estimated adjusted rental, as reasonably determined by Lessor by reference to the then available C.P.I. information. Upon notification of the actual adjustment after publication of the required C.P.I., any overpayment shall be credited against the next installment of rent due, and any underpayment shall be immediately due and payable by Lessee. Lessor's failure to request payment of an estimated or actual rent adjustment shall not constitute a waiver of the right to any adjustment provided for in the Lease or this addendum.

(d) In the event the compilation and/or publication of the C.P.I. shall be transferred to any other governmental department or bureau or agency or shall be discontinued, then the index most nearly the same as the C.P.I. shall be used to make such calculation. In the event that Lessor and Lessee cannot agree on such alternative index, then the matter shall be submitted for decision to the American Arbitration Association in accordance with the then rules of said association and the decision of the arbitrators shall be binding upon the parties. The cost of said Arbitrators shall be paid equally by Lessor and Lessee.

Initials: \_\_\_\_\_  
\_\_\_\_\_

Initials: gsh  
\_\_\_\_\_

Bldg 4

BUSINESS PROPERTY LEASE

THIS AGREEMENT, made in duplicate this 1st day of August 1987  
by and between

INDUSTRIAL BOWLING CORP., a California Corporation,  
hereinafter referred to as "LESSOR"

and

HAWKER PACIFIC, INC.  
hereinafter referred to as "LESSEE"

WITNESSETH:

1. That the Lessor, in consideration of the sum of -----TEN-----  
Dollars (\$ 10.00 ) to him in hand paid by the Lessee, the receipt of which  
is hereby acknowledged, hereby and upon the following terms and conditions, leases  
to the Lessee, and the Lessee hereby hires and takes from the Lessor, those certain  
premises in the City of Los Angeles , County of Los Angeles, State  
of California, more particularly described as follows:  
See Exhibit "B", Parcel 1

Commonly known as 11258 Sherman Way, Sun Valley, California

2. The term of this lease shall be Approx. Nine Years, Four Months  
commencing on the 7th day of December 19 87  
and ending on the 31st day of March 19 97.

3. The Lessee agrees to pay as rent for said demised premises, the total sum  
of \$4,200 per mo. subject to the rent escalation addendum attached to the lease as Exhibit  
"A" and made a part hereof.  
Dollars (\$ ), for the full term aforesaid, payable in installments  
of \$4,200.00 per mo. \*The 1st full month's rent covering the period Jan. 1 through  
January 31, 1988 shall be paid on the signing of this lease. Lessee shall have a period  
rent-free occupancy commencing Dec. 7, 1987 and ending Dec. 21, 1987. Rent for the period  
Dec. 22, 1987 through Dec. 31, 1987 in the amount of \$1,380.80 (calculated based on a per  
diem rent figure of \$138.08) shall be paid to Lessor in addition to the first full month  
rent as stated above.

Said payments shall be made in lawful money of the United States in advance, on  
the 1st day of each calendar month during said term, to Lessor or his  
agent, at such place in the County of Los Angeles as may be designated by the  
Lessor.

The first monthly\* installment shall be paid on the signing  
of this lease.

4. In addition to the rent hereinbefore reserved, the Lessee shall pay before  
delinquency all charges for water, gas, heat, electricity, power, refrigeration  
and any and all other services which may be used in or upon demised premises during  
the term of this lease, whether the same be charged or assessed at flat rates,  
measured by separate meters or pro rated. Should any such charge be payable by  
Lessee to Lessor and, after becoming due and payable, be and remain unpaid for  
five (5) days after presentation of bill therefore by Lessor to Lessee, the Lessor,  
in addition to any other remedy, at his option, may cause the discontinuance of  
such service to demised premises until such charge is fully paid and Lessor shall  
not be liable in any way for such discontinuance or any damage arising therefrom.

JEA



5. The Lessee agrees to use the premises for the purpose of storage and/or any lawful manufacturing purpose permitted in a M-2 Zone in the City of Los Angeles.

together with such other uses as may be incidental thereto and for no other purpose without the written consent of the Lessor. The Lessee shall not use the premises nor permit the same to be used for any unlawful purpose and at all times shall maintain the same in a sanitary and orderly condition, and conform to all laws and ordinances, and all regulations of any governmental body appertaining and shall not do or permit any act or omission which will void or suspend any insurance policy covering the premises, nor do anything which will cause any increase in the fire hazard in said premises or the building of which same may be a part, without the written consent of the Lessor first had and obtained and in the event of any consent by Lessor, express or implied, all increase in insurance premiums by reason thereof shall be paid by the Lessee. No auctions, nuisances, nor anything which will be an unreasonable annoyance to adjoining tenants or which will injure the reputation of the premises shall be done or permitted. This lease and the leasehold estate created hereby are, and shall be subject and subordinate to any encumbrances, or extensions thereof, now covering the demised premises, or any part thereof, or encumbrances hereafter placed on the demised premises. Lessee shall execute any further instrument required by Lessor subordinating this lease to such encumbrances.

6. Should the Lessor in good faith be unable to deliver possession of demised premises at the time herein specified for the commencement of said term, this lease shall not be void or voidable and Lessor shall not be liable in damages to Lessee, but Lessor shall use due diligence to deliver said premises as soon as possible thereafter and in such event Lessee shall have no right of cancellation herein unless said premises are not so delivered within a reasonable time. Lessee shall be entitled to an appropriate credit on the rent reserved hereunder for such period as delivery cannot be made.

7. The Lessee covenants that his taking possession of the herein demised premises shall be an acceptance of the safety and condition thereof; that no representations not herein stated regarding the leased premises, have been made by Lessor or any other person in his behalf. Lessee, as a material part of the consideration to be rendered to the Lessor, hereby waives all claims against Lessor for damage to, or loss of, property in, upon or about said premises and for injuries to persons in or about said premises from any cause arising at any time, and Lessee agrees to hold and save Lessor harmless and indemnified from all loss, damage, liability, expense or injury to any person or to the property of any person arising from the neglect or use of the premises by Lessee or any third person. Any and all elevators or other equipment in or about the premises shall be operated solely at Lessee's risk, except such as are operated entirely by Lessor.

8. The Lessee at his cost shall keep every part of the premises, its equipment and appurtenances, including all exterior glass, in the same good condition or repair as they now are or may later be put by the Lessor, except as otherwise provided herein, ordinary use excepted. The Lessor shall not be called upon to make any repairs, alterations, improvements or additions in, to or about the premises, except as otherwise provided herein, and should Lessee fail to keep said premises properly repaired, Lessor may do so (but is not so obligated), and the cost of such repairs shall be paid by the Lessee with the next installment of and the same as rent due hereunder. The Lessee shall not place or maintain any sign, emblem, or other advertising matter of any kind on the exterior walls, grounds or roof or in or upon the windows or doors of the premises, without the written consent of the Lessor, and Lessor may remove any such sign which is maintained without such consent. The Lessee shall not make any change, alteration, or addition in or to the premises without the written consent of the Lessor first obtained, but this shall not prevent Lessee from installing trade fixtures and temporary office partitions, providing the same comply with all laws, ordinances and regulations applicable thereto, and the same may be removed at any time before the end of this lease, if the premises shall not be injured by such removal or provided that Lessee repairs any such injury; except, however, that any linoleum or other floor covering that has been glued to the floor shall be, and remain a part of the demised premises and shall not be removed at any time without the written consent of the Lessor. The Lessee agrees to save the Lessor harmless from and against all expenses, liens, claims, or damages to either property or person which may or might arise by reason of the making of any repairs, alterations, additions or improvements to the demised

premises, and further agrees to promptly remove any liens which may be filed or imposed against the demised premises. The Lessee on demand shall pay any increase in taxes paid by Lessor by reason of the assessment as improvements or additions and alterations made by Lessee and removable by him. The Lessee shall neither install nor maintain any machinery or apparatus, the weight or operation of which will tend to injure or be detrimental to the premises.

9. The Lessee shall not assign nor hypothecate this lease or the leasehold estate created hereby, nor sublet the whole or any part of the demised premises, without the written consent of the Lessor first had or obtained, and any attempt so to do shall be void and confer no rights on any third party, and shall be cause for cancellation of this lease by the Lessor at his option, and this provision against assignment, hypothecation and subletting shall be deemed to be a continuing covenant and apply not only to the Lessee herein, but to any and all sub-tenants, assignees and mortgagees of said leasehold premises or estate and to anyone who may in any manner acquire any interest therein. This lease shall not be assignable by operation of law. Should the Lessee abandon the premises or should any other person remain in possession thereof for five (5) consecutive days by virtue of any attachment or execution or through any bankruptcy or insolvency proceeding, or assignment for the benefit of creditors; or should Lessee default in any of his covenants or violate any of the provisions hereof, the Lessor at his option may re-enter and take possession of the premises and remove all persons and property therefrom and at his option terminate this lease, with or without due process of law, such process being expressly waived by Lessee. In the event that Lessor elects to re-enter and take possession of said premises but not to terminate this lease, Lessee agrees to pay Lessor on demand, the cost of recovering possession of said premises and cost of reletting, including the usual commissions, and also to pay monthly, on demand, any deficiency in the rent. It is agreed by the Lessor and the Lessee that if this lease shall be terminated by the Lessor by reason of any breach thereof by the Lessee, the Lessor shall thereupon be entitled to recover from the Lessee the worth at the time of such termination, of the excess, if any, of the amount of rent and charges equivalent to rent reserved in this lease for the balance of the term as provided in Paragraph 2 hereof, over the then reasonable rental value of the premises for the same period. The several rights and remedies herein granted to the Lessor shall be cumulative and in addition to any others he may be entitled to by law, and the exercise of one or more rights or remedies shall not impair Lessor's right to exercise any other right or remedy; and the Lessee hereby waives all claims for damages that may be caused by the action of Lessor under the provisions of this paragraph, and all claims for damages to, or loss of, property belonging to Lessee, or any other person, firm or corporation that may be in or upon the premises at the time.

10. Lessee shall pay all real and personal property taxes levied against demised premises.

11. Lessee shall at all times during the term of this lease maintain and carry at Lessee's own cost and expense, liability insurance in insurance companies satisfactory to Lessor insuring the Lessee, the Lessor and the demised premises against damages or injuries to persons or property with limits of not less than \$500,000.00 for damage or injury to any one person and 1,000,000.00 for damages or injuries to more than one person and for property damage in an amount not less than \$25,000.00. Lessee shall deposit copies of such insurance policies with Lessor upon request of Lessor. Lessee also to provide fire & extended coverage in the amount of \$300,000.00 and name Industrial Bowling Corp. as additional insured.

12. As security for the payment of the rent hereunder provided and for the payment of all monies provided hereunder to be paid by the Lessee, and for the faithful performance of all of the terms, covenants and conditions of this lease

on the part of the Lessee to be kept and performed, the Lessee has, upon the execution of this lease, deposited with the Lessor the sum of \$4,200.00 receipt of which is hereby acknowledged by the Lessor, which said sum Lessor shall hold as security without payment of interest thereon to Lessee. Upon the expiration date of the term of this lease or of any extension thereof or any sooner termination thereof, as herein provided, and provided at such time the Lessee be not in default in any of the terms and provisions of this lease, Lessor shall return to the Lessee the aforesaid sum of \$ 4,200.00 , deposited by the Lessee as security hereunder.

13. The Lessor reserves the right to enter the premises during reasonable business hours, for the purpose of inspection, exhibition, posting notices or supervising any necessary repairs. The Lessor may maintain such notices on the premises as may be necessary to protect him against loss from mechanics' liens or otherwise. The Lessor shall have the right to alter the said building, or add thereto, and for that purpose may erect scaffolding or other necessary or proper structures, and in such event Lessor shall not be liable to Lessee for any damage or inconvenience occasioned thereby; but any such work or alterations shall be made in such manner as to inconvenience said Lessee as little as possible.

14. In case Lessee holds over after the end of the term herein provided, with the express or implied consent of the Lessor, such tenancy shall be from month to month only, and not a renewal hereof, and the rent shall be at the rate of

\*The current rent amount on March 31, 1997.....Dollars (\$        ), per month; subject, however to every other term, covenant and condition of this lease.

15. At the expiration or other termination of said term or of any extension or hold-over period thereof, the Lessee shall quit and deliver up possession of the premises unto the Lessor, in as good condition as upon delivery of possession to the Lessee, ordinary use thereof and damage by any of the contingencies mentioned in Paragraph Sixteen (16) hereof excepted. Immediately upon vacating said premises the Lessee shall remove all rubbish therefrom, and upon his failure so to do, the Lessor may do so, and the Lessee shall pay to Lessor, upon demand, the reasonable expense thereof.

16. Should the premises be so badly damaged by fire, earthquake, incidents of war, or other sudden violent action of the elements, as to render them wholly unfit for Lessee's occupancy and so that they cannot be restored with reasonable diligence within 90 working days after the commencement of actual work, then this lease may be terminated within the period of 30 days after such disaster, by either party, upon written notice to the other, whereupon Lessee shall surrender the premises and shall not be liable for any further rental, and Lessor shall refund any unearned rent paid in advance by Lessee, calculated at a daily rate, based on the regular monthly rental. Should this lease not be so terminated or in the event of any lesser damage by any such cause, the premises shall be restored with all reasonable speed by the Lessor at his expense, and the Lessee shall pay a reasonable rental during the period of such restoration for such part of the premises as shall be fit for occupancy by Lessee, and shall not be entitled to any damages for any loss occasioned by the injury to, or the destruction of said building or of Lessee's property; nor shall the rent be abated if Lessee is able to carry on his business as usual in the said premises.

17. Lessee will pay and indemnify Lessor against all legal costs and charges, including attorney's fees, reasonably incurred by Lessor in enforcing any covenant or agreement of this lease or in or about the defense or prosecution of any suit in discharging the said premises, or any part thereof, from any lien, judgment, or encumbrance caused or suffered by Lessee, or in any suit or proceeding against the Lessee in which the Lessor may be made a party by reason of being the owner of said demised premises. Whenever it shall be necessary for either party to give notice or present a bill to the other, respecting this lease, such notice or bill may be sent by registered mail, postage prepaid, addressed to the Lessor at:

1819 W. Olive Avenue, Burbank, California 91506

or the Lessee at:

2921 Empire Ave, Burbank, California

and such notice or presentation shall be deemed to be complete twenty-four hours after the same has been deposited in any United States Post Office, or mail box in the County of Los Angeles. This shall be a valid and sufficient service of notice for all purposes. The Lessor reserves the right for himself or his agents, during

# ADDENDUM TO STANDARD INDUSTRIAL LEASE

Dated August 1, 1987By and Between INDUSTRIAL BOWLING CORP.& HAWKER PACIFIC, INC.20 RENT ESCALATIONS(a) On October 1, 1989; April 1, 1992; October 1, 1994

the monthly rent payable under paragraph 4 of the attached Lease shall be adjusted by the increase, if any from the date this Lease commenced, in the Consumer Price Index of the Bureau of Labor Statistics of the U.S. Department of Labor for Urban Wage Earners and Clerical Workers, Los Angeles-Long Beach Anaheim, California (1967=100), "All Items", herein referred to as "C.P.I."

(b) The monthly rent payable in accordance with paragraph (a) of this Addendum shall be calculated as follows: the rent payable for the first month of the term of this Lease, as set forth in paragraph 4 of the attached Lease, shall be multiplied by a fraction the numerator of which shall be the C.P.I. of the calendar month during which the adjustment is to take effect, and the denominator of which shall be the C.P.I. for the calendar month in which the original Lease term commences. The sum so calculated shall constitute the new monthly rent hereunder, but in no event, shall such new monthly rent be less than the rent payable for the month immediately preceding the date for rent adjustment.

(c) Pending receipt of the required C.P.I. and determination of the actual adjustment, Lessee shall pay an estimated adjusted rental, as reasonably determined by Lessor by reference to the then available C.P.I. information. Upon notification of the actual adjustment after publication of the required C.P.I., any overpayment shall be credited against the next installment of rent due, and any underpayment shall be immediately due and payable by Lessee. Lessor's failure to request payment of an estimated or actual rent adjustment shall not constitute a waiver of the right to any adjustment provided for in the Lease or this addendum.

(d) In the event the compilation and/or publication of the C.P.I. shall be transferred to any other governmental department or bureau or agency or shall be discontinued, then the index most nearly the same as the C.P.I. shall be used to make such calculation. In the event that Lessor and Lessee cannot agree on such alternative index, then the matter shall be submitted for decision to the American Arbitration Association in accordance with the then rules of said association and the decision of the arbitrators shall be binding upon the parties. The cost of said Arbitrators shall be paid equally by Lessor and Lessee.

Initials: \_\_\_\_\_

Initials:

**PARCEL 1**

That portion of the West half of the East one-half (measure to the center line of the adjoining streets) of Lot 62 of the Lanier Ship Ranch Land and Water Co. Subdivision in the City of Los Angeles County of Los Angeles, State of California as per map recorded in Book 31 pages 80 et seq., of Miscellaneous Records, in the office of the County Recorder of said County, lying northerly of a line parallel with and distant Northerly 30 feet from a line bearing South  $89^{\circ} 04' 25''$  East from a point in the center line of Tujunga Avenue, 60 feet wide, distant thereon North  $0^{\circ} 00' 30''$  West 406.44 feet from the intersection of said center line with the westerly prolongation of the south line of said Lot 62.

Except the following described parcel;

Beginning at the Southeastern corner of the above described parcel, thence North  $89^{\circ} 04' 25''$  West 130.10 feet, thence Northerly parallel with the East line of the West half of the East half of said Lot 62, 160.00 feet, thence North  $89^{\circ} 04' 25''$  West 89.90 feet to the Westerly line of the Easterly 220.00 feet of the West one-half of the East one-half of said Lot 62, thence North along said last mentioned Westerly line 93.19 feet to the South line of the Northerly 619 feet of said Lot 62, thence Westerly along said last mentioned South line 110.00 feet to the West line of the East one-half of said Lot 62, thence Northerly along said last mentioned West line, 619.00 feet to the North line of Lot 62, thence Easterly along the Northerly line of Lot 62 to the East line of the West one-half of the East one-half of Lot 62, thence Southerly along said last

Mentioned East line 875.60 feet to the point of beginning of this description.

PARCEL B

An easement for driveway purposes over the West 20.00 feet of the East 240.00 feet of the North 614.00 feet of the West one-half of the East one-half of said Lot 62

the last thirty (30) days of Lessee's tenancy, to place and maintain in one or more conspicuous places in the leased premises, "For Rent", "For Lease", or "For Sale" signs. If, at any time Lessor shall waive any covenant, condition or restriction of this lease, either before or after breach thereof, he shall not thereafter be deemed to have consented to any further breach of the same covenant, condition or to have waived subsequent compliance with any performance of such or any other covenant, condition, or restriction herein.

18. Where the term "Lessor" or "Lessee" is used herein, the same shall apply to the plural if necessary, and all terms used in the singular or in the masculine gender, shall apply to the plural, or to the feminine or neuter genders, where the context so requires.

19. Each and all of the terms and agreements herein contained, shall be binding upon and inure to the benefit of the successors in interest of the Lessor, and wherever the context admits or requires, the successors in interest of the Lessee. Time is of the essence of this lease.

IN WITNESS WHEREOF, the parties hereto have executed this lease at Los Angeles, California, the day and year first above written.

LESSOR INDUSTRIAL BOWLING CORP.

John D. Howard  
BY: JOHN D. HOWARD, PRESIDENT

LESSEE HAWKER PACIFIC, INC.

Douglas M. Nestor  
Assistant Secretary

STATE OF CALIFORNIA )  
 ) SS.  
COUNTY OF LOS ANGELES )

On DEC 17, 1987, before me, the undersigned, a Notary Public in and for said State personally appeared JOHN D. HOWARD, known to me to be the PRESIDENT of the Corporation that executed the within instrument, known to me to be the person who executed the within Instrument, on behalf of the Corporation, therein named, and acknowledged to me that such Corporation executed the same.

WITNESS my hand and official seal.

V. M. Holmes  
Notary Public in and for said State

STATE OF CALIFORNIA )  
 ) SS.  
COUNTY OF LOS ANGELES )

On DEC 17, 1987, before me, the undersigned, a Notary Public in and for said State personally appeared DOUGLAS M. NESTOR, known to me to be the ASSISTANT SECRETARY of the Corporation that executed the within instrument, known to me to be the person who executed the within Instrument, on behalf of the Corporation, therein named, and acknowledged to me that such Corporation executed the same.

WITNESS my hand and official seal.



Rebecca Sandra Ward  
Notary Public in and for said State



FACILITY FEATURES SHOWN ON MAP

- A. 1,1,1 Trichloroethane Storage Tank
- B. Former chemical storage shed (now removed)
- C. Former chemical storage shed (now removed)
- D. Waste Oil and Water Storage Tank
- E. Flammable liquid storage shed for new products (solvents, thinners, kerosene), metal, resting on concrete slab within berm; 14'x14'; next to waste oil and water tank (D)
- F. Hazardous Waste Staging Area [in same area as D and E], on paved area sloping down into block wall "L"
- G. Cooling Tower
- H. Septic Tanks; concrete, one connected to restroom in Building 4 and one to Building 3, with leach lines
- I. Underground storage tank, not connected by piping to anything else
- J. Sump, concrete, 1'x1'x3'
- K & L. 2 sumps [see Response to First EPA Request, description at answer 2]
- M & N. 2 chemical storage sheds, metal, each 14'x14', both on one concrete slab, with berm around each shed
- O. Flammable liquid storage area, 20'x20' bermed area for lubricating oils, on concrete slab with surrounding 10' high chain link fence
- P. Building 2 clarifier, consisting of 5 connected compartments 4x5x5 feet deep; not in use; in floor, extending 2-4 feet below grade
- Q. Building 2 plating tank containment pit, concrete, 13' wide x 75' long x 7-8' deep; 4-5' below grade; draining into sump in NW corner which is pumped out whenever liquids collect
- R. Hydraulic Test Stand Housing, 40' x 30' stucco, 2 room building on concrete slab (only plumbing is water line in)







LAW ENVIRONMENTAL, INC.

3420 N. SAN FERNANDO BLVD.  
SUITE 200  
BURBANK, CALIFORNIA 91504  
818-848-0214  
PANAFAX 818-848-1674

January 4, 1989

Hawker Pacific, Inc.  
11310 Sherman Way  
Sun Valley, California 91352

Project No. 58-8601  
RWQCB File No. AB104.0436

Attention: Mr. Erik Johnson  
Hazardous Waste Engineer

Gentlemen:

REPORT  
Subsurface Investigation  
AB-1803 Follow-up Program  
11310 Sherman Way  
Sun Valley, California

### INTRODUCTION

Law Environmental, Inc. is pleased to submit this report of subsurface investigation at the above-referenced property. The investigation was requested by the Regional Water Quality Control Board (RWQCB) in their September 6, 1988 letter to Mr. Erik Johnson (Appendix A). This report addresses all elements of the required investigation which concern subsurface investigation and associated laboratory analysis (Items 2 and 4a). Other requirements of the September 6, 1988 letter are/will be addressed in documents provided to the RWQCB by Hawker Pacific.

Our professional services have been performed using that degree of care and skill customarily exercised under similar



circumstances by reputable consulting engineers and geologists practicing in this or equivalent localities. No other warranty, expressed or implied, is made as to the information or professional advice included in this report. This report has been prepared expressly for Hawker Pacific, Inc. to be used solely for the purposes of the required RWQCB AB-1803 investigation. The report has not been prepared for use by other parties and may not contain sufficient information for other parties or other uses.

All findings and conclusions derived from measurements or analyses of soil, water, air and/or gas are based on the conditions which existed only at those particular sample locations and the times of sampling. The analytical results reflect the range of accuracy and detection levels, when specified, for the particular analytical equipment and/or specific analytical method(s) used.

### FIELD INVESTIGATION

#### METHODS

Our field investigation was conducted on December 1, 1988. Three soil borings were completed to a depth of 10 feet at the locations indicated on Plate 1, Site Map. Boring B-1 was drilled



approximately one foot from the berm surrounding the TCA tank at the rear of Building 2. Boring B-2 was drilled approximately two feet from the berm surrounding the waste oil tank. Boring B-3 was drilled within the drum storage area.

All borings were drilled using a truck-mounted hollow-stem auger with an outer diameter of eight inches. Undisturbed samples were collected and preserved in accordance with the Soil Sampling Protocol in Appendix B. Samples from each boring were monitored in the field for the presence of volatile organic compounds using a Foxboro OVA 108GC (OVA). This unit is calibrated to a methane standard and provides a direct readout with a sensitivity of about one part per million (ppm) for most fuel hydrocarbons and organic solvents. Nine soil samples (three from each boring) were transported to Brown and Caldwell Laboratories in Pasadena for analysis.

#### GEOLOGY

Up to one foot of fill soils consisting of silty sand to sandy silt were encountered in our borings. The fill was underlain by recent alluvium consisting of a light brown, medium to coarse-grained sand with a trace of silt. This sand persisted to the bottom of our borings. Details of the geology are shown on the boring logs included as Appendix C.



Previous work in this vicinity indicates that deeper materials at this location are generally characterized by coarse sands and gravels. Los Angeles County Flood Control District data suggest that the depth to ground water at this location is in excess of 150 feet.

#### OBSERVATIONS

Ground water was not encountered in any of our borings. No visual or olfactory evidence of soil contamination was observed. No OVA readings were obtained from the borings which were in excess of background values.

#### ANALYTICAL RESULTS

In accordance with RWQCB requirements, all analyses were performed by a State and EPA-certified laboratory. The laboratory report and associated chain-of-custody documents are included in Appendix D. Samples from depths of 1, 5 and 10 feet in each boring were analyzed discretely for volatile organic compounds by EPA Method 8240.

Only one compound, methylene chloride, was detected in the soil samples. A fairly uniform concentration, 5 to 16 parts per



billion (ppb), was identified in all 9 samples. Methylene chloride is a commonly used solvent in the laboratory. Brown and Caldwell Laboratories has determined that the reported methylene chloride concentrations are due to laboratory contamination. This is stated in the letter from Brown and Caldwell which follows the laboratory report. Even so, the levels detected are well below the Drinking Water Action Level of 40 ppb recommended by the State of California Department of Health Services (January 1987).

#### CONCLUSIONS

Our investigation has not detected the presence of volatile organic compounds within the investigated areas of the subject property. The low levels of methylene chloride detected by the laboratory are believed to be the result of laboratory contamination.

-oOo-

One copy of this report should be submitted to the RWQCB by January 6, 1989. This extension was granted by Ms. Mila Sylvestre at the request of Law Environmental on December 21, 1988.



It has been a pleasure to have been of service to you on this project. If you have any questions regarding this report, please contact the undersigned.

Yours very truly,

LAW ENVIRONMENTAL, INC.

by *Warren W. Gross*  
Warren W. Gross  
Staff Hydrogeologist

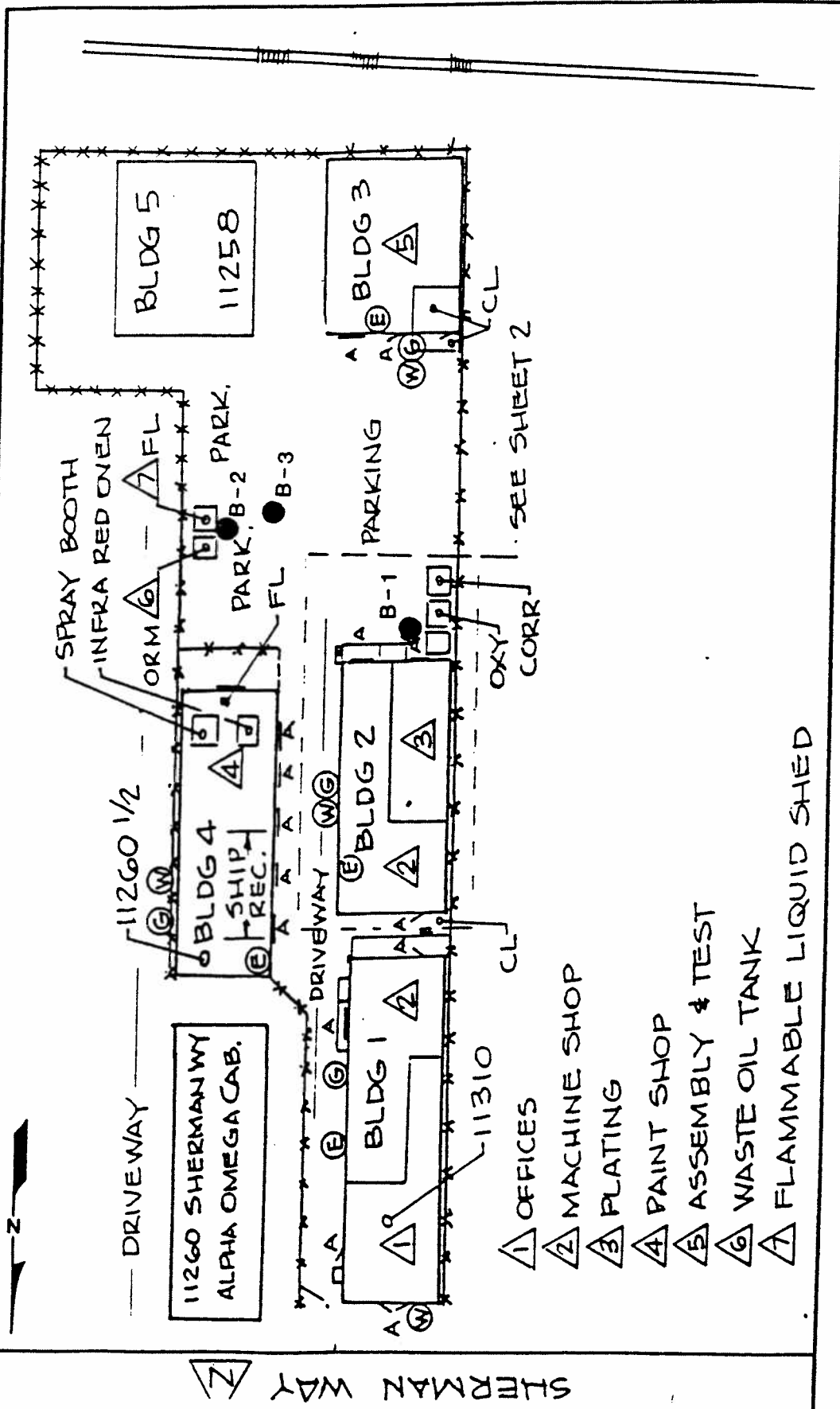
by *Jack Carmody*  
Jack Carmody, Manager  
Environmental Assessment

by *Glenn A. Brown*  
Glenn A. Brown, C.E.G. 3  
Senior Vice President

WG/gla/8601.RPT  
Attachments

(3 copies submitted)

SITE MAP FOR BUSINESS PLAN (BP-6)



B-1 ● BORING LOCATION AND NUMBER

BASE MAP BY HAWKER PACIFIC  
NO SCALE PROVIDED

SITE MAP



29006





LAW ENVIRONMENTAL INC.

## BORING LOG

OWNER Hawker Pacific PROJECT No. 58-8601  
LOCATION 11310 Sherman Way, Sun Valley BORING No. B-1  
DRILLED BY Drill-Line PAGE 1 of 1  
DRILLING METHOD Hollow Stem Auger DATE 12-1-88  
BOREHOLE DEPTH 10 feet BOREHOLE DIA. 8 inches LOGGED BY MM

DEPTH (feet)	BLOW COUNT	GASTECUTOR (ppm hexane)	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
1					SM ML	3" Asphaltic Paving FILL - SILTY SAND/SANDY SILT - fine-grained, some clay, slightly plastic, damp, medium brown.
2					SP	SAND - medium to coarse grained, trace of silt, dry to damp, white to light brown
3						
4						
5						
6						
7						
8						
9						
0						
1						
2						
3						
4						
5						
6						
7						
8						Remarks:
9						End boring at ten feet. Ground Water not encountered. No Caving. No unusual odors or soil discoloration.
0						

interval  
sampled { interval  
preserved



OWNER Hawker Pacific PROJECT No. 58-8601  
LOCATION 11310 Sherman Way, Sun Valley BORING No. B-2  
DRILLED BY Drill-Line PAGE 1 of 1  
DRILLING METHOD Hollow Stem Auger DATE 12-1-88  
BOREHOLE DEPTH 10 feet BOREHOLE DIA. 8 inches LOGGED BY MM

C-2



LAW ENVIRONMENTAL, INC.

## BORING LOG

OWNER Hawker Pacific PROJECT No. 58-8601  
LOCATION 11310 Sherman Way, Sun Valley BORING No. B-3  
DRILLED BY Drill-Line PAGE 1 of 1  
DRILLING METHOD Hollow Stem Auger DATE 12-1-88  
BOREHOLE DEPTH 10 feet BOREHOLE OIA. 8 inches LOGGED BY MM

DEPTH (feet)	BLOW COUNT	CASING (ppm hexane)	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
						2" Asphaltic Paving
1					SP	SAND - medium to coarse grained, trace silt, damp to moist-moisture increasing with depth, light brown.
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**BROWN AND CALDWELL LABORATORIES****ANALYTICAL REPORT**

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105  
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579  
LOG NO: P88-12-019

Received: 01 DEC 88  
Reported: 09 DEC 88

Mark Miller  
Law Environmental  
3420 N. San Fernando Rd., Suite 200  
Burbank, CA 91504

Project: 58-8601

**REPORT OF ANALYTICAL RESULTS**

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES					DATE SAMPLED
12-019-1	B-1	1'				01 DEC 88
12-019-2	B-1	5'				01 DEC 88
12-019-3	B-1	10'				01 DEC 88
12-019-4	B-2	1'				01 DEC 88
12-019-5	B-2	5'				01 DEC 88
PARAMETER	12-019-1	12-019-2	12-019-3	12-019-4	12-019-5	
Vol.Pri.Poll. (EPA-8240)						
Date Extracted	12/06/88	12/06/88	12/06/88	12/06/88	12/06/88	
Dilution Factor, Times 1	1	1	1	1	1	
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5	<5	
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5	<5	
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5	<5	
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5	<5	
1,1-Dichloroethylene, ug/kg	<5	<5	<5	<5	<5	
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5	<5	
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5	
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5	<5	
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5	
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	<5	
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5	<5	
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5	<5	
2-Hexanone, ug/kg	<5	<5	<5	<5	<5	
Acetone, ug/kg	<50	<50	<50	<50	<50	
Acrolein, ug/kg	<50	<50	<50	<50	<50	
Acrylonitrile, ug/kg	<50	<50	<50	<50	<50	
Bromodichloromethane, ug/kg	<5	<5	<5	<5	<5	
Bromomethane, ug/kg	<5	<5	<5	<5	<5	

**BROWN AND CALDWELL LABORATORIES****ANALYTICAL REPORT**

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Mark Miller  
Law Environmental  
3420 N. San Fernando Rd., Suite 200  
Burbank, CA 91504

Project: 58-8601

**REPORT OF ANALYTICAL RESULTS**

Page 2

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
12-019-1	B-1 1'	01 DEC 88				
12-019-2	B-1 5'	01 DEC 88				
12-019-3	B-1 10'	01 DEC 88				
12-019-4	B-2 1'	01 DEC 88				
12-019-5	B-2 5'	01 DEC 88				
PARAMETER	12-019-1	12-019-2	12-019-3	12-019-4	12-019-5	
Benzene, ug/kg	<5	<5	<5	<5	<5	
Chlorobenzene, ug/kg	<5	<5	<5	<5	<5	
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5	<5	
Chloroethane, ug/kg	<5	<5	<5	<5	<5	
Bromoform, ug/kg	<5	<5	<5	<5	<5	
Chloroform, ug/kg	<5	<5	<5	<5	<5	
Chloromethane, ug/kg	<5	<5	<5	<5	<5	
Carbon Disulfide, ug/kg	<5	<5	<5	<5	<5	
Dibromochloromethane, ug/kg	<5	<5	<5	<5	<5	
Ethylbenzene, ug/kg	<5	<5	<5	<5	<5	
Freon 113, ug/kg	<5	<5	<5	<5	<5	
Methyl Isobutyl Ketone, ug/kg	<5	<5	<5	<5	<5	
Methyl Ethyl Ketone, ug/kg	<50	<50	<50	<50	<50	
Methylene Chloride, ug/kg	16	6	6	5	5	
Tetrachloroethylene, ug/kg	<5	<5	<5	<5	<5	
Styrene, ug/kg	<5	<5	<5	<5	<5	
Trichloroethylene, ug/kg	<5	<5	<5	<5	<5	
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5	<5	
Toluene, ug/kg	<5	<5	<5	<5	<5	
Vinyl Acetate, ug/kg	<50	<50	<50	<50	<50	
Vinyl Chloride, ug/kg	<5	<5	<5	<5	<5	

**BROWN AND CALDWELL LABORATORIES****ANALYTICAL REPORT**

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105  
(818) 795-7553 (213) 681-4655

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Mark Miller  
Law Environmental  
3420 N. San Fernando Rd., Suite 200  
Burbank, CA 91504

Project: 58-8601

**REPORT OF ANALYTICAL RESULTS**

Page 3

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED				
12-019-1	B-1 1'	01 DEC 88				
12-019-2	B-1 5'	01 DEC 88				
12-019-3	B-1 10'	01 DEC 88				
12-019-4	B-2 1'	01 DEC 88				
12-019-5	B-2 5'	01 DEC 88				
PARAMETER	12-019-1	12-019-2	12-019-3	12-019-4	12-019-5	
Total Xylene Isomers, ug/kg	<50	<50	<50	<50	<50	
trans-1,2-Dichloroethylene, ug/kg	<5	<5	<5	<5	<5	
trans-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	<5	

**BROWN AND CALDWELL LABORATORIES****ANALYTICAL REPORT**

373 SOUTH FAIR OAKS AVENUE, PASADENA, CA 91105  
(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P88-12-019

Received: 01 DEC 88

Reported: 09 DEC 88

Mark Miller  
Law Environmental  
3420 N. San Fernando Rd., Suite 200  
Burbank, CA 91504

Project: 58-8601

**REPORT OF ANALYTICAL RESULTS**

Page 4

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED			
12-019-6	B-2 10'			01 DEC 88	
12-019-7	B-3 1'			01 DEC 88	
12-019-8	B-3 5'			01 DEC 88	
12-019-9	B-3 10'			01 DEC 88	
PARAMETER	12-019-6	12-019-7	12-019-8	12-019-9	
Vol.Pri.Poll. (EPA-8240)					
Date Extracted	12/06/88	12/06/88	12/07/88	12/07/88	
Dilution Factor, Times 1	1	1	1	1	
1,1,1-Trichloroethane, ug/kg	<5	<5	<5	<5	
1,1,2,2-Tetrachloroethane, ug/kg	<5	<5	<5	<5	
1,1,2-Trichloroethane, ug/kg	<5	<5	<5	<5	
1,1-Dichloroethane, ug/kg	<5	<5	<5	<5	
1,1-Dichloroethylene, ug/kg	<5	<5	<5	<5	
1,2-Dichloroethane, ug/kg	<5	<5	<5	<5	
1,2-Dichlorobenzene, ug/kg	<5	<5	<5	<5	
1,2-Dichloropropane, ug/kg	<5	<5	<5	<5	
1,3-Dichlorobenzene, ug/kg	<5	<5	<5	<5	
cis-1,3-Dichloropropene, ug/kg	<5	<5	<5	<5	
1,4-Dichlorobenzene, ug/kg	<5	<5	<5	<5	
2-Chloroethylvinylether, ug/kg	<5	<5	<5	<5	
2-Hexanone, ug/kg	<5	<5	<5	<5	
Acetone, ug/kg	<50	<50	<50	<50	
Acrolein, ug/kg	<50	<50	<50	<50	
Acrylonitrile, ug/kg	<50	<50	<50	<50	
Bromodichloromethane, ug/kg	<5	<5	<5	<5	
Bromomethane, ug/kg	<5	<5	<5	<5	
Benzene, ug/kg	<5	<5	<5	<5	

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**REPORT OF ANALYTICAL RESULTS**

Page 5

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
12-019-6	B-2 10'	01 DEC 88
12-019-7	B-3 1'	01 DEC 88
12-019-8	B-3 5'	01 DEC 88
12-019-9	B-3 10'	01 DEC 88

PARAMETER	12-019-6	12-019-7	12-019-8	12-019-9
Chlorobenzene, ug/kg	<5	<5	<5	<5
Carbon Tetrachloride, ug/kg	<5	<5	<5	<5
Chloroethane, ug/kg	<5	<5	<5	<5
Bromoform, ug/kg	<5	<5	<5	<5
Chloroform, ug/kg	<5	<5	<5	<5
Chloromethane, ug/kg	<5	<5	<5	<5
Carbon Disulfide, ug/kg	<5	<5	<5	<5
Dibromochloromethane, ug/kg	<5	<5	<5	<5
Ethylbenzene, ug/kg	<5	<5	<5	<5
Freon 113, ug/kg	<5	<5	6	9
Methyl Isobutyl Ketone, ug/kg	<5	<5	<5	<5
Methyl Ethyl Ketone, ug/kg	<50	<50	<50	<50
Methylene Chloride, ug/kg	6	6	6	7
Tetrachloroethylene, ug/kg	<5	<5	<5	<5
Styrene, ug/kg	<5	<5	<5	<5
Trichloroethylene, ug/kg	<5	<5	<5	<5
Trichlorofluoromethane, ug/kg	<5	<5	<5	<5
Toluene, ug/kg	<5	<5	<5	<5
Vinyl Acetate, ug/kg	<50	<50	<50	<50
Vinyl Chloride, ug/kg	<5	<5	<5	<5
Total Xylene Isomers, ug/kg	<50	<50	<50	<50
trans-1,2-Dichloroethylene, ug/kg	<5	<5	<5	<5



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**REPORT OF ANALYTICAL RESULTS**

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED			
12-019-6	B-2 10'			01 DEC 88	
12-019-7	B-3 1'			01 DEC 88	
12-019-8	B-3 5'			01 DEC 88	
12-019-9	B-3 10'			01 DEC 88	
PARAMETER		12-019-6	12-019-7	12-019-8	12-019-9
trans-1,3-Dichloropropene, ug/kg		<5	<5	<5	<5

**BROWN AND CALDWELL LABORATORIES****ANALYTICAL REPORT**

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Project: 58-8601

**REPORT OF ANALYTICAL RESULTS**

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LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
12-019-10	B-1-1' BC/QC SPK	01 DEC 88
PARAMETER	12-019-10	
Vol.Pri.Poll. (EPA-8240)		
Date Extracted	12/06/88	
Dilution Factor, Times 1	1	
1,1-Dichloroethylene, Percent	130	
Benzene, Percent	100	
Chlorobenzene, Percent	105	
Trichloroethylene, Percent	85	
Toluene, Percent	105	
Other Vol.Pri.Poll. (EPA-8240)	---	

**BROWN AND CALDWELL LABORATORIES****ANALYTICAL REPORT**

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**REPORT OF ANALYTICAL RESULTS**

Page 8

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
12-019-11	B-1 1' BC/QC DUP-SPK	01 DEC 88
PARAMETER	12-019-11	
Vol.Pri.Poll. (EPA-8240)		
Date Extracted	12/06/88	
Dilution Factor, Times 1	1	
1,1-Dichloroethylene, Percent	130	
Benzene, Percent	110	
Chlorobenzene, Percent	110	
Trichloroethylene, Percent	90	
Toluene, Percent	110	
Other Vol.Pri.Poll. (EPA-8240)	---	

**BROWN AND CALDWELL LABORATORIES****ANALYTICAL REPORT**

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Project: 58-8601

**REPORT OF ANALYTICAL RESULTS**

Page 9

LOG NO	SAMPLE DESCRIPTION, NON-SALINE WATER SAMPLES	DATE SAMPLED
12-019-12	Laboratory Control Standard	
PARAMETER	12-019-12	
Vol.Pri.Poll. (EPA-8240)		
Date Extracted	12/06/88	
Dilution Factor, Times 1	1	
1,1,1-Trichloroethane, Percent	95	
1,1,2,2-Tetrachloroethane, Percent	75	
1,1,2-Trichloroethane, Percent	110	
1,1-Dichloroethane, Percent	95	
1,1-Dichloroethylene, Percent	90	
1,2-Dichloroethane, Percent	95	
1,2-Dichlorobenzene, Percent	100	
1,2-Dichloropropane, Percent	90	
1,3-Dichlorobenzene, Percent	100	
cis-1,3-Dichloropropene, Percent	80	
1,4-Dichlorobenzene, Percent	100	
2-Chloroethylvinylether, Percent	90	
2-Hexanone, Percent	105	
Acetone, Percent	85	
Acrolein, Percent	69	
Acrylonitrile, Percent	71	
Bromodichloromethane, Percent	95	
Bromomethane, Percent	160	
Benzene, Percent	90	
Chlorobenzene, Percent	100	
Carbon Tetrachloride, Percent	90	
Chloroethane, Percent	90	

**BROWN AND CALDWELL LABORATORIES****ANALYTICAL REPORT**

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Project: 58-8601

**REPORT OF ANALYTICAL RESULTS**

Page 10

LOG NO	SAMPLE DESCRIPTION, NON-SALINE WATER SAMPLES	DATE SAMPLED
12-019-12	Laboratory Control Standard	
PARAMETER	12-019-12	
Bromoform, Percent	75	
Chloroform, Percent	100	
Chloromethane, Percent	80	
Carbon Disulfide, Percent	80	
Dibromochloromethane, Percent	95	
Ethylbenzene, Percent	90	
Freon 113, Percent	85	
Methyl Isobutyl Ketone, Percent	95	
Methyl Ethyl Ketone, Percent	110	
Methylene Chloride, Percent	75	
Tetrachloroethylene, Percent	85	
Styrene, Percent	90	
Trichloroethylene, Percent	95	
Trichlorofluoromethane, Percent	65	
Toluene, Percent	80	
Vinyl Acetate, Percent	55	
Vinyl Chloride, Percent	205	
Total Xylene Isomers, Percent	88	
trans-1,2-Dichloroethylene, Percent	80	
trans-1,3-Dichloropropene, Percent	80	

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Reported: 09 DEC 88

Mark Miller  
Law Environmental  
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Project: 58-8601

**REPORT OF ANALYTICAL RESULTS**

Page 11

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
12-019-13	Reagent Blank	
PARAMETER	12-019-13	
Vol.Pri.Poll. (EPA-8240)		
Date Extracted	12/06/88	
Dilution Factor, Times 1	1	
1,1,1-Trichloroethane, ug/L	<5	
1,1,2,2-Tetrachloroethane, ug/L	<5	
1,1,2-Trichloroethane, ug/L	<5	
1,1-Dichloroethane, ug/L	<5	
1,1-Dichloroethylene, ug/L	<5	
1,2-Dichloroethane, ug/L	<5	
1,2-Dichlorobenzene, ug/L	<5	
1,2-Dichloropropane, ug/L	<5	
1,3-Dichlorobenzene, ug/L	<5	
cis-1,3-Dichloropropene, ug/L	<5	
1,4-Dichlorobenzene, ug/L	<5	
2-Chloroethylvinylether, ug/L	<5	
2-Hexanone, ug/L	<5	
Acetone, ug/L	<50	
Acrolein, ug/L	<50	
Acrylonitrile, ug/L	<50	
Bromodichloromethane, ug/L	<5	
Bromomethane, ug/L	<5	
Benzene, ug/L	<5	
Chlorobenzene, ug/L	<5	
Carbon Tetrachloride, ug/L	<5	
Chloroethane, ug/L	<5	

**BROWN AND CALDWELL LABORATORIES****ANALYTICAL REPORT**

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(818) 795-7553 (213) 681-4655

FAX: (818) 795-8579

LOG NO: P88-12-019

Received: 01 DEC 88

Reported: 09 DEC 88

Mark Miller  
Law Environmental  
3420 N. San Fernando Rd., Suite 200  
Burbank, CA 91504

Project: 58-8601

**REPORT OF ANALYTICAL RESULTS**

Page 12

LOG NO	SAMPLE DESCRIPTION, BLANK WATER SAMPLES	DATE SAMPLED
12-019-13	Reagent Blank	
PARAMETER	12-019-13	
Bromoform, ug/L	<5	
Chloroform, ug/L	<5	
Chloromethane, ug/L	<5	
Carbon Disulfide, ug/L	<5	
Dibromochloromethane, ug/L	<5	
Ethylbenzene, ug/L	<5	
Freon 113, ug/L	6	
Methyl Isobutyl Ketone, ug/L	<5	
Methyl Ethyl Ketone, ug/L	<50	
Methylene Chloride, ug/L	9	
Tetrachloroethylene, ug/L	<5	
Styrene, ug/L	<5	
Trichloroethylene, ug/L	<5	
Trichlorofluoromethane, ug/L	<5	
Toluene, ug/L	<5	
Vinyl Acetate, ug/L	<50	
Vinyl Chloride, ug/L	<5	
Total Xylene Isomers, ug/L	<50	
trans-1,2-Dichloroethylene, ug/L	<5	
trans-1,3-Dichloropropene, ug/L	<5	

  
Jeffrey A. Erion, Laboratory Manager



**BROWN AND CALDWELL LABORATORIES**

373 SOUTH FAIR OAKS AVENUE PASADENA, CA 91105 • (818) 795-7553

January 3, 1989

Mr. Warren Gross  
Law Environmental  
3420 North San Fernando Road, Suite 200  
Burbank, California 91504

Project: 58-8601

Subject: Methylene Chloride Contamination in the Laboratory

Dear Mr. Gross:

As we discussed with the low-level 8240 analyses for Brown and Caldwell Laboratories log number P88-12-019, methylene chloride is a common laboratory contaminant used in several organic sample preparation, including Methods 625 and 608. Although we take special precautions to isolate the use of methylene chloride, we cannot eliminate this compound entirely from the laboratory atmosphere. The levels of methylene chloride vary, not only from day to day, but also from morning to evening, depending upon the type of sample preparation activity taking place in the laboratory. We typically see between 2 and 10 ug/L methylene chloride in our laboratory blanks.

We reported a blank value of 9 ug/L methylene chloride with your report. The sample values ranged from 6 to 16 ug/kg methylene chloride. This is laboratory contamination and this variance is within reason.

Should you have any questions, please do not hesitate to call us.

Very truly yours,

BROWN AND CALDWELL

Jane Freemyer  
Client Services Manager

JF:lah





LAW ENVIRONMENTAL, INC.  
3420 N. San Fernando Blvd.  
Suite 200  
Burbank, California 91504  
(818) 848-0214

# CHAIN OF CUSTODY RECORD

Lab Log Number

088-12-019

Client Name		LAW ENVIRONMENTAL		Project Number		58-8601	
Project Name		HANKER PACIFIC					
Report Attention		WARREN GROSS		Sampled by MARK MILLER			
Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	Remarks	
1	12/1/88		SD	B-1 @ 1'	1	LOW LEVEL	
2				B-1 @ 5'	1	DETECTION LIMITS	
3				B-1 @ 10'	1	(5-10 ppb)	
4				B-2 @ 1'	1		
5				B-2 @ 5'	1	INCLUDE QA/QC	
6				B-2 @ 10'	1	DOCUMENTS	
7				B-3 @ 1'	1		
8				B-3 @ 5'	1		
9				B-3 @ 10'	1		

Signature

Company

Date

Time

Relinquished by	Mark I. Miller	LAW ENVIRONMENTAL	12/1/88	7:35 PM
Received by	R. E. Turner	B.C.A.C.	12/1/88	7:35 PM
Relinquished by				
Received by				
Relinquished by				
Received by				

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

\*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

LAB SAMPLE ID NO.: 905-4847

DATE REPORTED : 6/6/89

SAMPLER :

All reporting units = 17/10g

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Acrolein	34210	ND
Acrylonitrile	34215	
Benzene	34030	
Bromodichloromethane	32101	
Bromoform	32104	
Bromomethane	34413	
Carbon tetrachloride	32102	
Chlorobenzene	34301	
Chloroethane	34311	
2-Chloroethylvinyl ether	34576	
Chloroform	32106	
Chloromethane	34418	
Dibromochloromethane	32105	
1,2-Dichlorobenzene	34536	
1,3-Dichlorobenzene	34566	
1,4-Dichlorobenzene	34571	
Dichlorodifluoromethane	34668	
1,1-Dichloroethane	34496	
1,2-Dichloroethane	34531	
1,1-Dichloroethylene	34501	
cis-1,2-Dichloroethylene	77093	
trans-1,2-Dichloroethylene	34546	
1,2-Dichloropropane	34541	
cis-1,3-Dichloropropylene	34704	
trans-1,3-Dichloropropylene	34699	
Ethyl benzene	34371	
Ethylene dibromide	77651	
Methylene chloride	34423	
Methyl Ethyl Ketone	81595	
Methyl Isobutyl Ketone	81596	
Styrene	77128	
1,1,2,2-Tetrachloroethane	34516	✓

LAB SAMPLE ID NO.: 905-4848

DATE REPORTED : 6/6/89

**SAMPLER :**

All reporting units = *us/bz*

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 2 of 2

[illegible]

LAB SAMPLE ID NO.: 905-4847

DATE REPORTED : 6/6/89

SAMPLER :

All reporting units = *mg/kg*

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 2 of 2

[illegible]





**LAW ENVIRONMENTAL, INC.**

3420 N. SAN FERNANDO BLVD.  
SUITE 200  
BURBANK, CALIFORNIA 91504  
818-848-0214  
(FAX 818-848-1674)

August 22, 1989

Hawker Pacific, Inc.  
11310 Sherman Way  
Sun Valley, CA 91352

Project No. 58-9558  
RWQCB File No. AB104.0436

Attention: Mr. Erik Johnson  
Hazardous Waste Engineer

Gentlemen:

Our "Report of Environmental Assessment, Private Sewage Disposal System and Industrial Waste Clarifier, 11310 Sherman Way, Sun Valley, California, for Hawker Pacific, Incorporated," is herewith submitted. This investigation was authorized by approval of our Scope of Services letter for Project No. 58-9558, dated April 19, 1989, in response to the Regional Water Quality Control Board's requirement of additional subsurface investigation of the subject property.

Our recommendations for additional investigation in the area of the industrial waste clarifier are discussed in the report.

Following your review of the attached report, one copy should be submitted to the RWQCB for review. Law Environmental appreciates the opportunity to provide our services for this project. Should you have any questions regarding our report, please do not hesitate to call our office.

Respectfully submitted,

**LAW ENVIRONMENTAL, INC.**

*Warren W. Gross*

Warren W. Gross  
Staff Hydrogeologist

*G. H. Kassakhian*

Garabet H. Kassakhian, A.M., Ph.D.  
Manager, Special Projects Department  
Senior Environmental Scientist

*Glenn A. Brown*

Glenn A. Brown, C.E.G. 3  
Senior Vice President

WWG/ks/9558.RPT

(4 Copies Submitted)

*2.2.89*



**REPORT OF ENVIRONMENTAL ASSESSMENT  
PRIVATE SEWAGE DISPOSAL SYSTEM AND INDUSTRIAL WASTE CLARIFIER  
FOR  
HAWKER PACIFIC, INC.  
11310 SHERMAN WAY  
SUN VALLEY, CALIFORNIA**

**INTRODUCTION**

This environmental assessment was performed for Hawker Pacific, Inc. in order to comply with the requirements of the Regional Water Quality Control Board (RWQCB). Law Environmental's final Work Plan for the assessment was submitted to the RWQCB and subsequently approved by the Board in their letter dated April 16, 1989.

The reporting deadline of June 26, 1989 specified by the RWQCB was waived by Ms. Mila Silvestre at the request of Law Environmental in order to allow time for the receipt of laboratory data collected by the RWQCB and inclusion of this data within our report.

Law Environmental has previously completed a subsurface investigation on the subject property for Hawker Pacific. The results of this investigation are included in our report dated January 4, 1989 for Project No. 58-8601.

Our professional services have been performed using that degree of care and skill customarily exercised under similar circumstances by reputable environmental professionals practicing in this or



equivalent localities. No other warranty, expressed or implied, is made as to the information or professional advice included in this report. This report has been prepared expressly for Hawker Pacific, Inc. and is directed towards complying with their specific needs. This report has not been prepared for use by other parties and may not contain sufficient information for other parties or other uses. Any other use, interpretation or emphasis, other than that contained herein, is done at the reader's own risk.

All findings and conclusions derived from measurements or analyses of soil, water, air and soil gas are based on the conditions which existed only at those particular sample locations and the times of sampling. They are constrained by detection limits, equipment, and the specific analytical methods used.

#### **PURPOSE**

The purpose of this investigation is to determine if subsurface soils on the subject property have been contaminated by the leakage of selected organic and/or inorganic contaminants from the private sewage disposal systems or the industrial waste clarifier and, if so, to what extent area ground water may be threatened.





### SCOPE OF INVESTIGATION

Prior to drilling, a review of available aerial photographs of the site and vicinity were examined for evidence of pertinent elements of the developmental history of the subject property. The Los Angeles Department of Sanitation was contacted regarding existing records of private sewage disposal systems (PSDS) on the property. An investigation of the extent of the PSDS system components was also completed.

Two 40 foot soil borings were drilled adjacent to two private sewage disposal systems. Two additional borings, each terminated at a depth of seven feet, were drilled at the location of the industrial waste clarifier in Building 2. Undisturbed soil samples were collected from the borings and submitted to a state-certified analytical laboratory for testing in accordance with RWQCB requirements. At the time of drilling, a RWQCB inspector was present to approve the boring locations, to observe the soil sampling protocol, and to collect split samples. The locations of pertinent features are shown on Figure 1, Site Map.



## **SUBSURFACE INVESTIGATIVE METHODS**

### **PSDS Location Survey**

Law Environmental retained Spectrum E.S.I. in order to probe accessible PSDS components and determine their location and dimensions. Spectrum also utilized several geophysical techniques in an effort to identify any leach fields associated with septic tanks in order to allow determination of whether or not additional borings would be required for the initial characterization of soils in the vicinity of the PSDS installations. Instrumentation utilizing the following methods of detection were employed:

- o Ground penetrating radar
- o Electromagnetic induction
- o Electromagnetic conduction (induced)
- o Electromagnetic conduction (ambient)

### **Drilling and Sampling**

#### **PSDS**

All field work was conducted on May 30, 1989. One soil boring was drilled at each of the two PSDS locations. Each boring was completed to a depth of 40 feet at the locations shown on Figure 2, Site Detail, PSDS Locations. Soil samples were collected from the borings at five foot intervals, beginning at a depth of five feet.



A truck mounted hollow stem auger drilling rig was employed for the borings. Soil samples were obtained according to procedures outlined in Appendix A, Soil Sampling Protocol. The sampling equipment was thoroughly washed and rinsed before each use. All augers were steam cleaned prior to use. The soil samples were obtained by driving a split-spoon California sampler into the soil ahead of the augers. A soil sample from each sample interval was screened using an organic vapor analyzer. Samples were retained in brass tubes, capped with Teflon® liners and tight-fittings plastic lids secured with vinyl tape. The samples were labeled and placed in an iced cooler.

The soil samples were delivered to West Coast Analytical Services in Santa Fe Springs, a state certified hazardous materials testing facility. All samples were submitted for analyses of volatile organic compounds (EPA Methods 8010/8020). Two samples from each PSDS boring were submitted for analysis of nitrate by EPA Method 300.6.

#### **Industrial Waste Clarifier**

Two soil borings were drilled adjacent to the industrial waste clarifier at the locations shown on Figure 3, Site Detail, Industrial Waste Clarifier. The borings were within two feet of the clarifier. An electrically powered drilling apparatus equipped



with solid stem flight augers was employed for the borings. Soil samples were collected at depths of 2.5 and 6.5 feet. Auger refusal was encountered at a depth of 7 feet due to a cobble layer encountered at this depth. Samples were obtained by driving a solid core hand sampler into the soil to ensure an undisturbed sample. All samples were secured and preserved using methods similar to those previously cited for the PSDS borings (see Appendix A). The soil samples were delivered to West Coast Analytical Services, a state certified laboratory in Santa Fe Springs, California, where they were analyzed for volatile organic compounds (EPA Method 8010/8020).

## **FINDINGS**

### **Records Search**

Records from the Sewer Division of the County of Los Angeles Department of Sanitation confirmed the existence of a PSDS on the subject property. The original sewer permit was found to be issued in the year 1954. No indication of the location of the PSDS was available.



### Aerial Photograph Review

An air photo search was carried out in an attempt to locate and characterize details of the two private sewage disposal systems on site. Air photos were obtained from the Public Relations Office of the Hollywood Burbank Airport.

Review of a 1958 photo of the property and vicinity revealed the presence of a large pit to the north of the site - probably a sand and gravel pit. Several additional photos which were not dated were observed in the collection. None of these photos provided useful details of the site. A 1969 photo showed that at that time neither rear building now present (Buildings 3 and 5) at the Hawker Pacific facility was in existence. No evidence of a PSDS was seen in the photos. The photo showing the greatest detail was dated 10/31/75. In the photo, the eastern rear building (Building #5) was present at the facility. There appeared to be some surface manifestation of a septic system present along the west side of the building.

The results of the probing and geophysical survey of the PSDS installations revealed the presence of two concrete holding tanks and one brick-lined seepage pit north of Building #3 and one concrete holding tank and one brick lined leach tank west of Building #5, as shown in Figure 2, Site Detail, PSDS Locations.



No leach fields were identified in association with either of the PSDS installations.

#### **PSDS**

Alluvial soils were encountered in the PSDS borings, consisting of medium to coarse-grained sand and silt with some gravel. A zone of water-saturated soils, approximately two to three feet thick, was encountered in boring B-1 at a depth of nine feet. This depth corresponds to the bottom depth of the PSDS leach pit. Soils at the same depth in boring B-2 were noted to contain much less moisture. Boring logs are included in Appendix B.

Free ground water was not encountered in either of the borings. Recent water levels in the area are reported to be approximately 247 feet below ground surface, according to the Los Angeles County Flood Control District.

Laboratory analysis of the samples collected from boring B-1 indicated the presence of toluene at all depths. Levels ranged from 9 ug/kg (parts per billion, by weight) to 110 ug/kg. The toluene concentration decreased sharply with depth below 25 feet (from 57 ug/kg to 11 ug/kg). No other volatiles were detected in boring B-1. Nitrate levels in samples collected from Boring B-1



at depths of 35 and 40 feet were found to be 3.5 and 3.9 mg/kg (parts per million, by weight), respectively.

Samples from boring B-2 were also found to contain toluene at all depths, ranging from 12 ug/kg to 120 ug/kg. In addition, tetrachloroethylene (PCE) was detected at the 10 and 15 foot depths (39 ug/kg and 3.9 ug/kg, respectively). Xylene was also detected at 20 feet (2 ug/kg). Nitrate levels in samples collected from Boring B-2 at depths of 35 and 40 feet were found to be 3.1 and 3.2 mg/kg, respectively.

No other volatile compounds were detected in any of the samples recovered from either boring. Analytical data for the PSDS borings are summarized in Table 1. The results of the split sample analyses by the RWQCB, which were provided to Law Environmental by Ms. Mila Silvestre, are also included. Complete analytical results are contained in Appendices B and C.

#### **Additional PSDS Sampling**

Law Environmental collected split soil samples from each PSDS boring at depths of 10, 20, 30 and 40 feet. The samples were turned over to the RWQCB inspector for testing by the California State Department of Health Services (DOHS) Laboratory. Each sample was analyzed for volatile organic compounds by EPA Method 8240 and



for total nitrogen by EPA Methods 350.2, 351.3 and 353.2. The laboratory analytical report from the DOHS laboratory is included as Appendix C.

Results of the DOHS volatile organic analysis are also shown in Table 1. No volatiles other than those indicated were detected in any of the PSDS split samples.

#### **Industrial Waste Clarifier**

In boring CB-1, adjacent to the waste clarifier, both toluene and PCE were found to be present. Toluene concentrations were 14 ug/kg at 2.5 feet and 28 ug/kg at 6.5 feet. PCE concentrations were 3 ug/kg at 2.5 feet and 4 ug/kg at 6.5 feet.

Traces of toluene and PCE were also found in boring CB-2, although these compounds were present only in the sample recovered from a depth of 6.5 feet. At that depth toluene concentrations were 1 ug/kg, while PCE was found to be present at 7 ug/kg.

No other volatile compounds were detected in the samples collected from boring CB-1 or 2. Analytical data for the clarifier borings are summarized in Table 2.





## CONCLUSIONS AND RECOMMENDATIONS

### PSDS Locations

#### Conclusions

Based on the results of our subsurface investigation, it appears that traces of toluene are present at both PSDS locations in concentrations which decrease fairly regularly with depth. Traces of PCE and xylene are observed at shallow depths in boring B-2, but these substances are not present at depth. State action levels for toluene in drinking water are recognized as 100 ug/kg. Based on the observed trend shown on Table 1, it is reasonable to expect that the levels of toluene decrease to below the method detectable limits of 5 ug/kg at depths from 60 to 80 feet below ground surface. Data obtained from the split samples by the California State Department of Health Services are consistent with this conclusion.

Results of the nitrate analyses show that the highest levels of nitrate were found in the split samples collected by the RWQCB in Boring B-1 at depths of 10 and 40 feet below ground surface. Levels of nitrogen as nitrate ( $\text{NO}_3$ ) were found at levels of 26.8 mg/kg and 21.7 mg/kg, respectively. At no other depths were levels of nitrogen found to be above 10 mg/kg. Data obtained from



the nitrate analysis conducted by West Coast Analytical Services for Law Environmental on the PSDS samples collected at depths of 35 and 40 feet yield consistently low nitrate levels of 3 to 4 ppm (ug/kg, by weight). State actions levels for nitrates in drinking water are recognized as 45 mg/kg.

### **Recommendations**

In view of recent ground water levels in the area of the site at approximately 247 feet below ground surface, the two PSDS locations do not appear to pose a threat to the ground water beneath the site. We recommend no further investigation for the PSDS areas.

### **Industrial Waste Clarifier**

### **Conclusions**

Traces of toluene and PCE also appear in the soil adjacent to and below the industrial waste clarifier. At a depth of 6.5 feet, approximately one foot below the depth of the bottom of the clarifier, the highest toluene and PCE concentrations reported were 28 ug/kg and 7 ug/kg respectively. Although these concentrations are quite low, they do represent an increase over the concentrations of the same constituents measured at a depth of 2.5 feet.



### Recommendations

In order to more definitively evaluate the potential for significant soil contamination in this area, we recommend that an additional boring be drilled adjacent to the location of Boring CB-1. Undisturbed soil samples should be collected at depths of 10, 15, and 20 feet and analyzed by EPA Method 8240. If field observations indicate evidence of soil contamination at a depth of 20 feet, then the boring should be deepened to 40 feet, if practical, with soil sampling and analysis continued at 5 foot intervals. A small, cart-mounted drilling rig will be appropriate for this additional investigation. Given the observed levels of soil contaminants shown by existing data, it appears unlikely that significant soil contamination from volatile organic compounds has occurred in the area of the clarifier. The recommended boring is to provide data in support of this observation.

- o0o -

## TABLES

TABLE 1

CONCENTRATION OF TOLUENE IN ug/kg IN SOIL SAMPLES (PSDS BORINGS)

Depth in Feet	Boring B-1 Toluene*	Boring B-2 Toluene*
5	9	19
10	110/15	120/13
15	32	47
20	33/18	31/10
25	57	12
30	14/16	44/12
35	14	53
40	11/5	
17/ND**		

\* Units are ug/kg, values after the slash (/) are from data collected by RWQCB personnel from the DOHS laboratory.

\*\* Not detected, detection limit equals 5 ug/kg.

TABLE 2

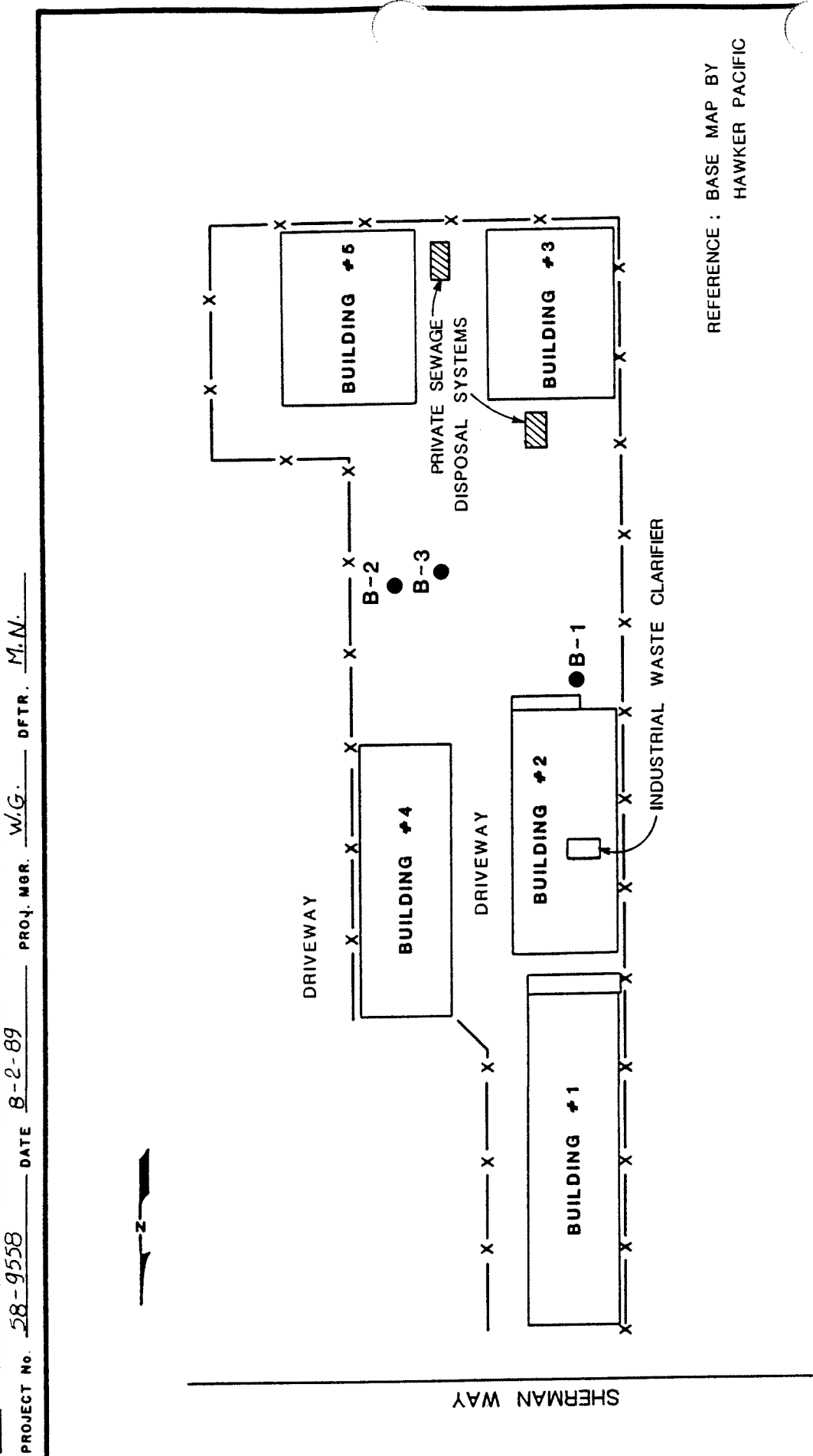
CONCENTRATIONS OF TOLUENE AND TETRACHLOROETHENE (PCE)  
IN ug/kg IN SOIL SAMPLES FROM CLARIFIER BORINGS

Depth in Feet	<u>Boring CB-1</u>		<u>Boring CB-2</u>	
	Toluene*	PCE*	Toluene*	PCE*
2.5	14	3	ND**	ND
6.5	28	4	1	7

\* Units are in ug/kg.

\*\* Not detected, detection limit equals 5 ug/kg.

**FIGURES**



REFERENCE : BASE MAP BY  
HAWKER PACIFIC

LEGEND

B-1 ● BORING LOCATION AND NUMBER



HAWKER PACIFIC

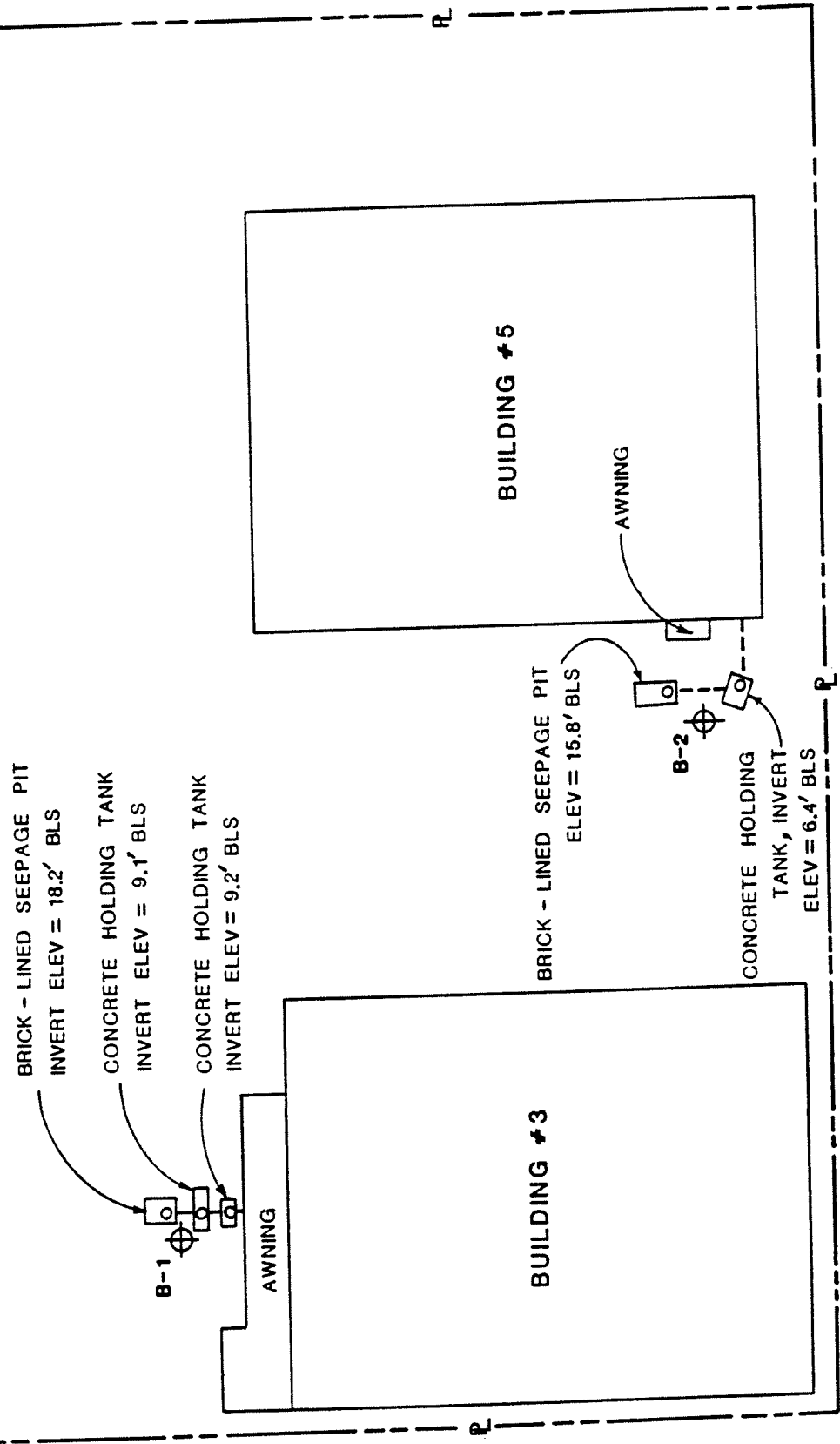
SITE MAP



FIGURE 1

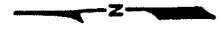
LAW ENVIRONMENTAL, INC.





LEGEND

- B-1 ⊕ BORING LOCATION AND NUMBER
- SEWER LINE
- TANK ACCESS



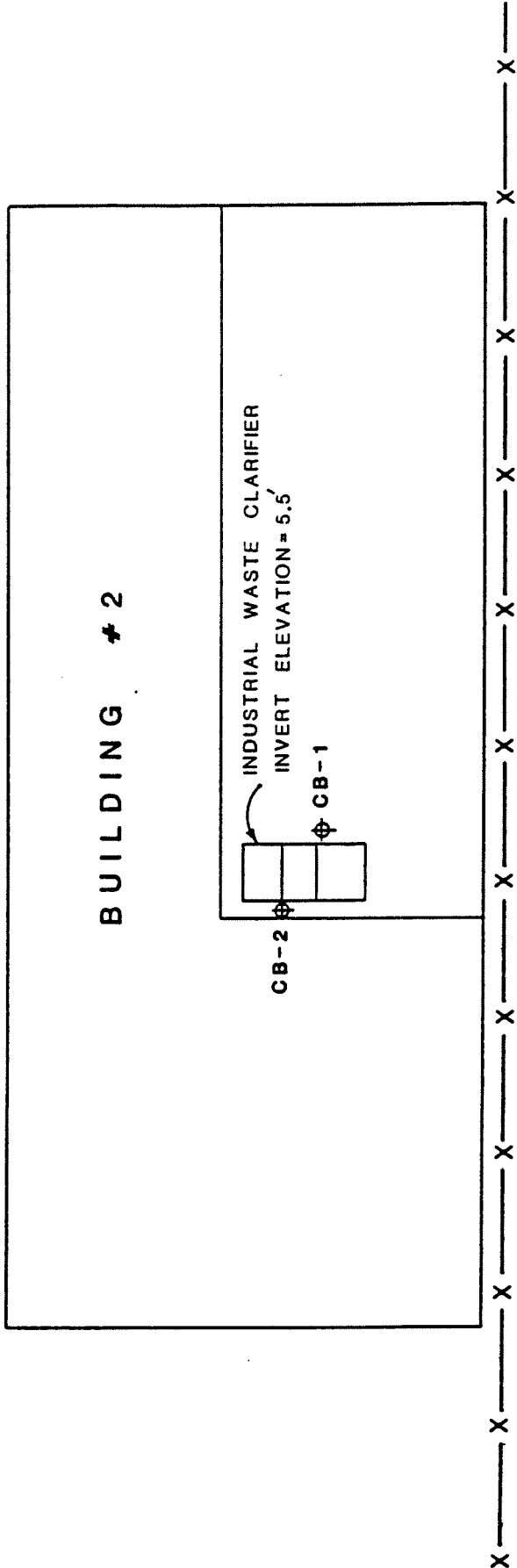
SITE DETAIL  
PSDS LOCATIONS

HAWKER PACIFIC



FIGURE 2

LAW ENVIRONMENTAL, INC.



LEGEND

CB-1 BORING LOCATION AND NUMBER

HAWKER PACIFIC

SITE DETAIL  
INDUSTRIAL WASTE  
CLARIFIER



FIGURE 3

LAW ENVIRONMENTAL, INC.

**APPENDIX A**

**CORRESPONDENCE FROM THE  
REGIONAL WATER QUALITY CONTROL BOARD**

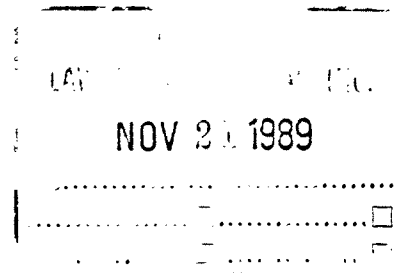
**LAW ENVIRONMENTAL WORK PLAN  
(Appendices not included)**

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—  
LOS ANGELES REGION**

101 Centre Plaza Drive  
Monterey Park, California 91754-2156  
(213) 266-7500



November 17, 1989



Mr. Erik Johnson  
HAWKER PACIFIC, INC.  
11310 Sherman Way  
Sun Valley, CA 91352

**SITE ASSESSMENT WORKPLAN - AB1803 WELL INVESTIGATION PROGRAM  
(FILE NO. AB104.0020)**

We are in receipt of your consultant's, Law Environmental, Inc., report dated November 14, 1989, containing the site assessment workplan for your facility.

We have reviewed the workplan and have no objections to its implementation, provided that all work is completed as specified in the proposal. The final locations of the soil test borings will be verified in the field on the day of drilling.

Please notify us at least one week prior to the date you plan to commence work at your facility so we can schedule an inspector to be present. The final report containing the results of the site assessment is due to this Regional Board by January 18, 1990.

If you have any questions, please contact Ms. Mila Silvestre at (213) 266-7529.

*David A. Bacharowski*  
DAVID A. BACHAROWSKI  
Environmental Specialist IV

cc: ✓ Mr. Warren Gross, Law Environmental, Inc.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—  
LOS ANGELES REGION

101 Centre Plaza Drive  
Monterey Park, California 91754-2156  
(213) 266-7500



September 13, 1989

Mr. Erik Johnson  
HAWKER PACIFIC, INC.  
11310 Sherman Way  
Sun Valley, CA 91352

SUBSURFACE INVESTIGATION - AB1803 WELL INVESTIGATION PROGRAM  
(FILE NO. AB104.0436)

Reference is made to your consultant's, Law Environmental, Inc., report dated August 10, 1989, containing the results of the subsurface investigation completed in the private sewage disposal system (PSDS) locations and in the industrial waste clarifier area at your facility.

We have reviewed and evaluated the information contained in the report, which has identified the presence of Toluene consistently with depth down to 40 feet below ground surface in the two PSDS locations. Further, Perchloroethylene and Toluene were identified to be present down to 6.5 feet below ground surface in the industrial waste clarifier area.

In order to further define the vertical extent of contamination beneath the areas of concern, you are required to develop a Site Assessment Workplan that includes the following:

1. A minimum of one (1) soil test boring to a depth of 80 ft below land surface in each of the two PSDS locations. Soil samples shall be taken at every 5-ft interval starting at 45 ft below land surface.
2. A minimum of one (1) soil test boring to a depth of 40 ft below land surface in the industrial waste clarifier area. Soil samples shall be taken at every 5-foot interval starting at 10 ft below land surface.
3. All soil samples shall be analyzed for Volatile Organic Compounds by EPA Method 8240 or EPA Methods 8010 & 8020.

Your Site Assessment Workplan containing all of the items identified above is due to this Regional Board by October 13, 1989. If you have any questions concerning this matter, please contact Mila P. Silvestre at (213) 266-7529.

A handwritten signature in dark ink, reading "David A. Bacharowski".

DAVID A. BACHAROWSKI  
Environmental Specialist IV

Mr. Erik Johnson  
Page 2

cc: Alisa Greene, U.S. EPA Region IX  
Bill Jones, L. A. County, Dept. of Health Services  
~~Warren Gross, Law Environmental, Inc.~~  
Publico Aliwalas, City of L. A., Bureau of Sanitation

**APPENDIX B**

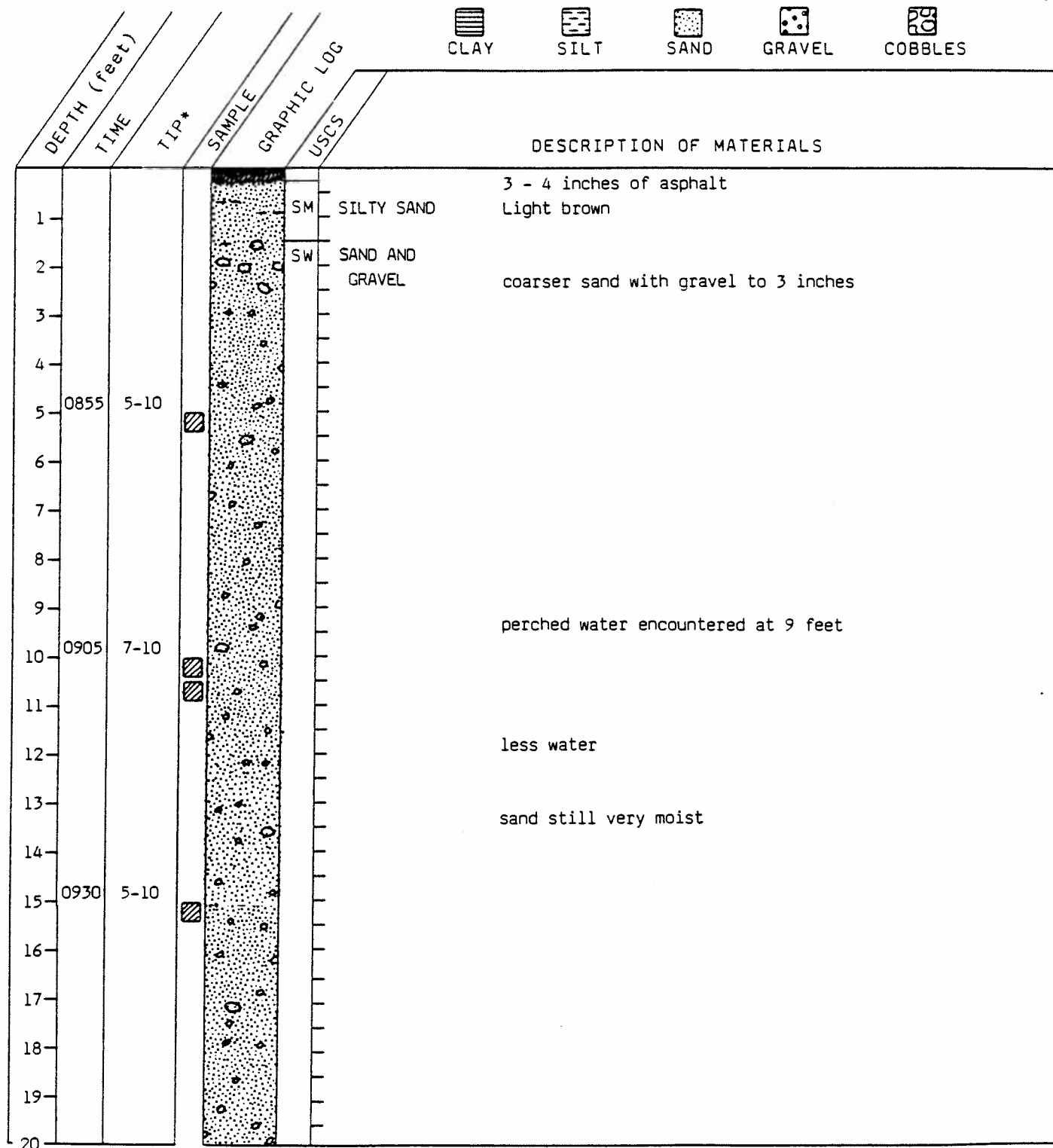
**BORING LOGS**



LAW ENVIRONMENTAL, INC.

# BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9558  
LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1  
DRILLED BY Drill-Line PAGE 1 of 2  
DRILLING METHOD Hollow stem auger DATE DRILLED 05-30-89  
BOREHOLE DEPTH 40 feet BOREHOLE DIA. 8-1/4 inches LOGGED BY Mike Hernandez



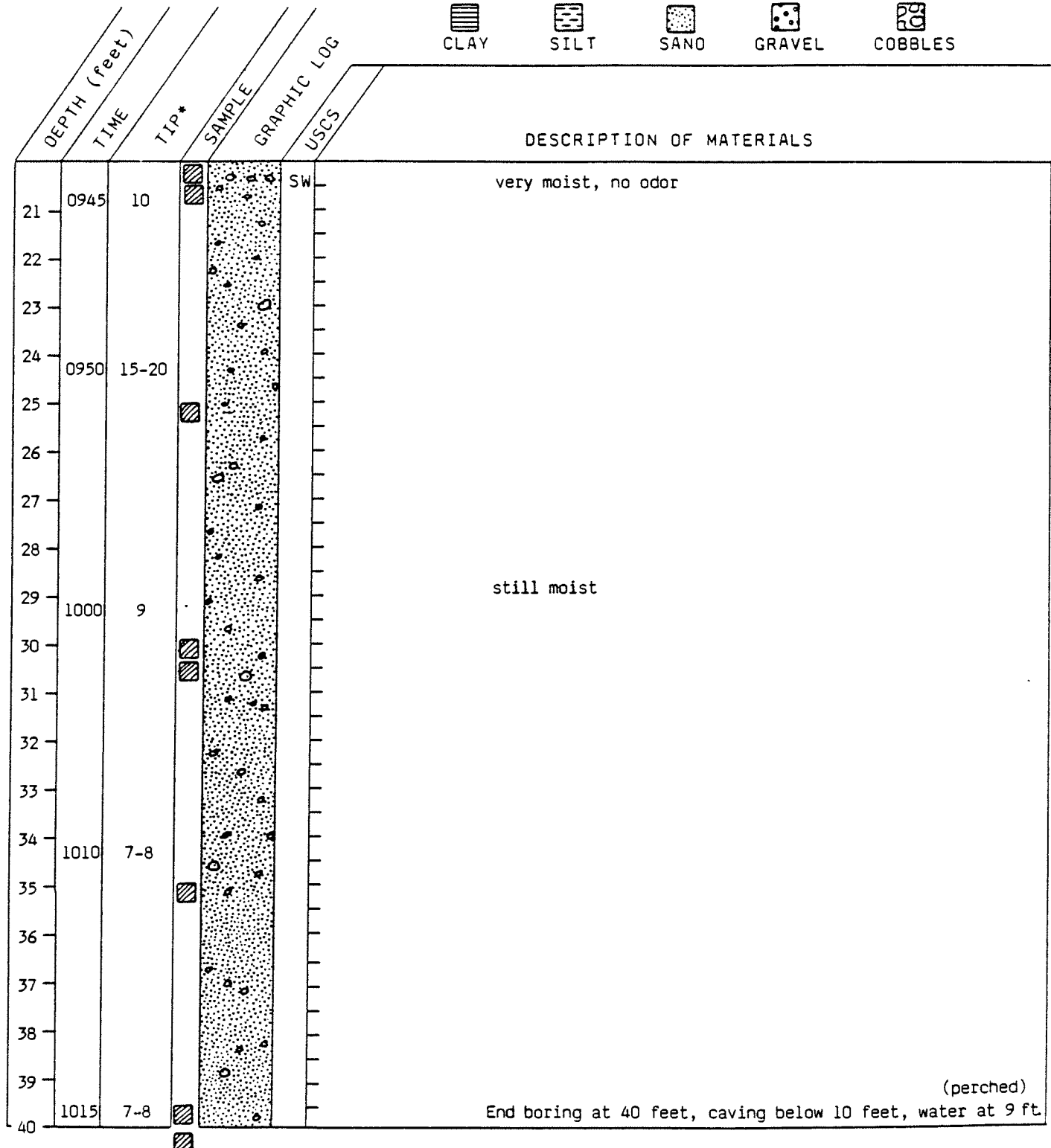




LAW ENVIRONMENTAL, INC.

# BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9558  
LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1  
DRILLED BY Drill-Line PAGE 2 of 2  
DRILLING METHOD Hollow stem auger DATE DRILLED 05-30-89  
BOREHOLE DEPTH 40 feet BOREHOLE OIA. 8-1/4 inches LOGGED BY Mike Hernandez



NOTES: denotes collection of undisturbed soil sample.  
\* TIP ambient is 5-8 ppm.



LAW ENVIRONMENTAL, INC.

# BORING LOG

OWNER Hawker-Pacific, Inc.

PROJECT No. 58-9558

LOCATION 11310 Sherman Way, Sun Valley, California

BORING No. B-2

DRILLED BY Drill-Line

PAGE 1 of 2

DRILLING METHOD Hollow stem auger

DATE DRILLED 05-30-89

BOREHOLE DEPTH 40 feet

BOREHOLE DIA. 8-1/4 inches

LOGGED BY Mike Hernandez



CLAY



SILT



SAND



GRAVEL



COBBLES

DEPTH (feet)	TIME	TIP*	SAMPLE	GRAPHIC LOG	USCS	DESCRIPTION OF MATERIALS
1					SW	3 - 4 inches of asphalt Brown, some pebbles
2						gravel to 2 - 3 inches
3						
4						
5	1117	10				
6						
7						
8						
9						gravel
10	1120	10				
11						more silt and fine grained sand, less gravel
12						very moist
13						
14	1125	10-15				
15						
16						
17						
18						
19						
20	1133	10				



LAW ENVIRONMENTAL, INC.

# BORING LOG

OWNER Hawker-Pacific, Inc.

PROJECT No. 58-9558

LOCATION 11310 Sherman Way, Sun Valley, California

BORING No. B-2

ORILLED BY Orill-Line

PAGE 2 of 2

ORILLING METHOD Hollow stem auger

DATE ORILLED 05-30-89

BOREHOLE DEPTH 40 feet

BOREHOLE DIA. 8-1/4 inches

LOGGED BY Mike Hernandez



CLAY



SILT



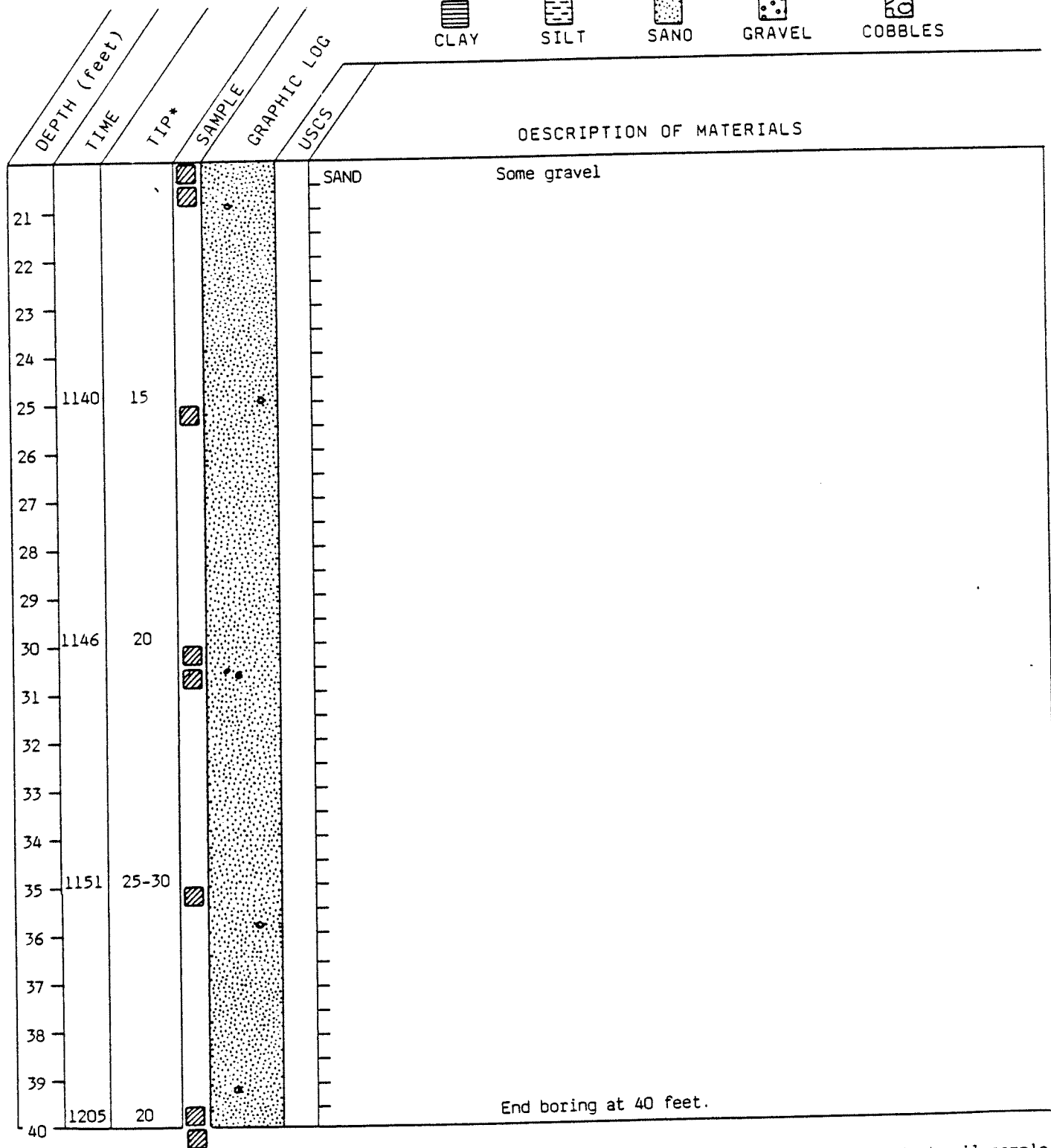
SAND



GRAVEL



COBBLES



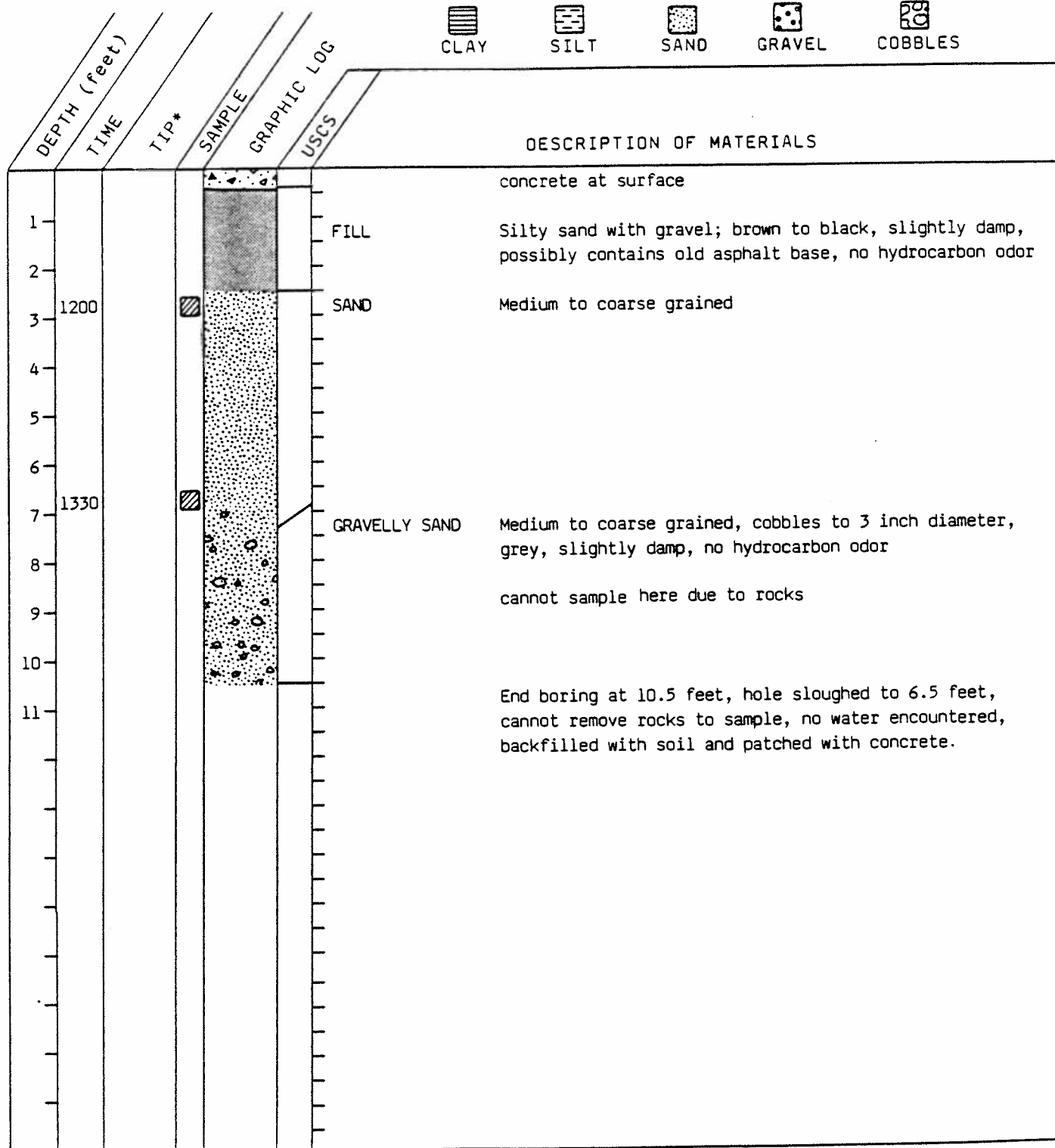
NOTES: \*TIP ambient is 5-8 ppm. Denotes collection of undisturbed soil sample.



LAW ENVIRONMENTAL, INC.

# BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9558  
LOCATION 11310 Sherman Way, Sun Valley, California BORING No. CB-1  
DRILLED BY AJ's Drilling PAGE 1 of 1  
DRILLING METHOD Flight auger DATE DRILLED 05-30-89  
BOREHOLE DEPTH 10.5 feet BOREHOLE DIA. 4 inches LOGGED BY Warren Gross



NOTES: Denotes collection of undisturbed soil sample.

\*TIP ambient is 5-8 ppm.



LAW ENVIRONMENTAL INC.

# BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9558  
LOCATION 11310 Sherman Way, Sun Valley, California BORING No. CB-2  
DRILLED BY AJ's Drilling PAGE 1 of 1  
DRILLING METHOD Flight auger DATE DRILLED 05-30-89  
BOREHOLE DEPTH 10 feet BOREHOLE DIA. 4 inches LOGGED BY \_\_\_\_\_



CLAY



SILT



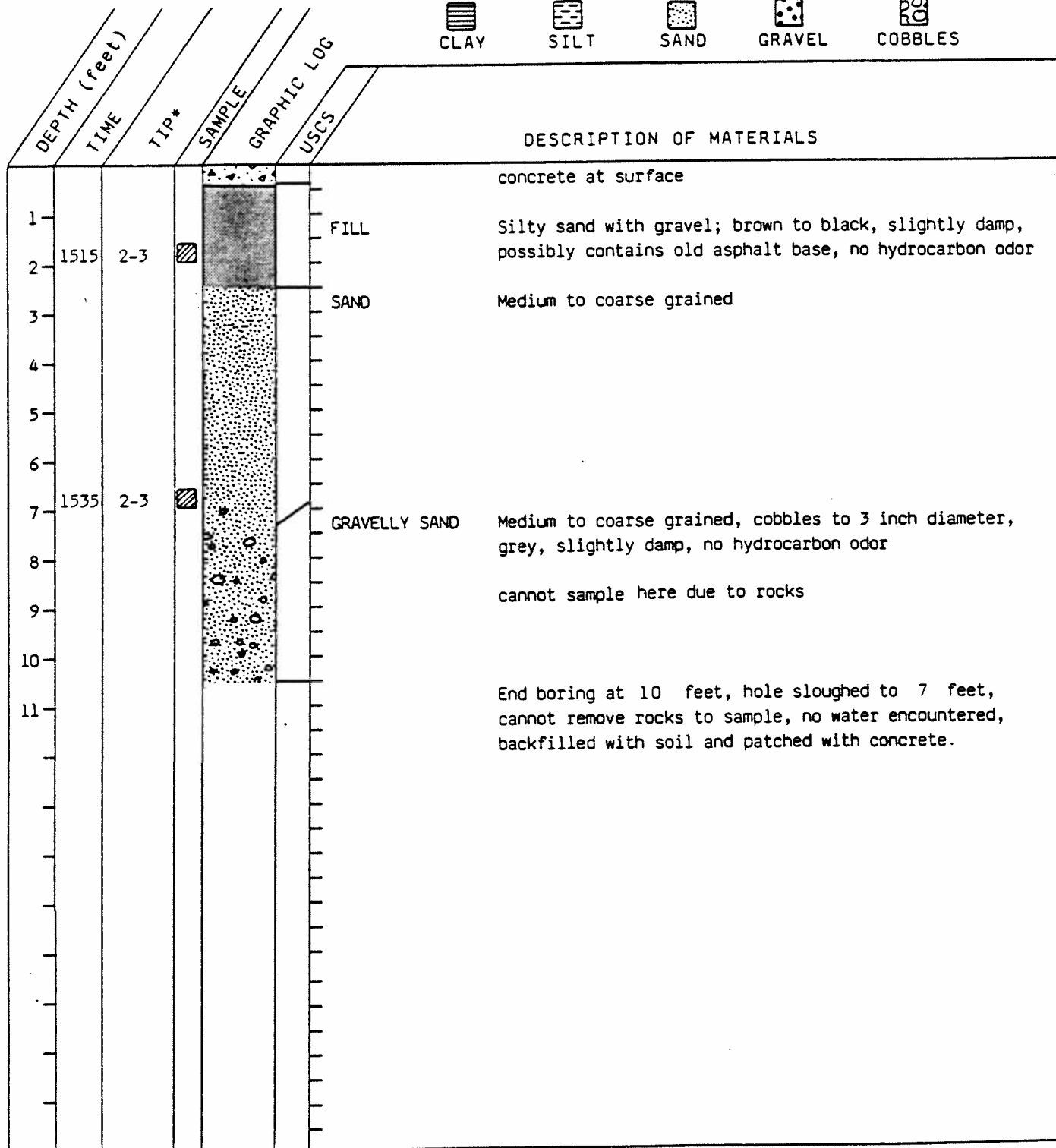
SAND



GRAVEL



COBBLES



NOTES: TIP ambient is 5-8 ppm.

▨ Denotes collection of undisturbed soil sample.

APPENDIX C

ANALYTICAL TEST RESULTS AND CHAIN-OF-CUSTODY  
OF SOIL SAMPLES  
(LAW ENVIRONMENTAL, INC.)

June 8, 1989

LAW ENVIRONMNTAL, INC.  
3420 N. San Fernando Blvd., Suite 200  
Burbank, CA 91504

Attn: Warren Gross

JOB NO. 12851

**WCAS**

**WEST COAST  
ANALYTICAL  
SERVICE, INC.**

ANALYTICAL CHEMISTS

A

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LABORATORY REPORT

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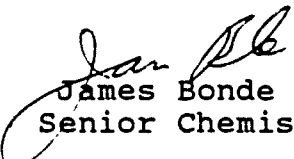
Samples Received: Twenty (20) soil samples  
Date Received: 5-31-89  
Purchase Order No: Proj#: 58-9558/Hawker-Pacific-Environmental


The samples were analyzed as follows:

<u>Samples Analyzed</u>	<u>Analysis</u>	<u>Results</u>
Twenty (20) soils and one (1) lab blank	Halogenated and Aromatic Volatile Organics by EPA 8010/8020	Data Sheets

Page 1 of 1

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James Bonde  
Senior Chemist

  
D.J. Northington, Ph.D.  
Technical Director

---

Client: LAW ENVIRONMENTAL, INC.  
Job No: 12851  
Date  
Analyzed: 06-Jun-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @5.0'

Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	9	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.



Client: LAW ENVIRONMENTAL, INC.  
Job No: 12851  
Date  
Analyzed: 06-Jun-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @10.0'

Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	110	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 12851  
Date  
Analyzed: 06-Jun-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-1@ 15.0'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	32	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 12851  
Date  
Analyzed: 06-Jun-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-1@ 20.0'

Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	33	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 12851  
Date  
Analyzed: 06-Jun-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @25'

Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	57	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
 Job No: 12851  
 Date  
 Analyzed: 06-Jun-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @30'

Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	14	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 12851  
Date  
Analyzed: 06-Jun-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @35'

Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	14	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL  
 Job No: 12851  
 Date  
 Analyzed: 06-JUNE-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: B-1 @40'  
 Matrix: SOIL  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	11	1
Chlorobenzene	ND	8
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	3
1,4-Dichlorobenzene	ND	4
1,2-Dichlorobenzene	ND	3

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL  
Job No: 12851  
Date  
Analyzed: 06-JUNE-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @5'  
Matrix: SOIL  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	19	1
Chlorobenzene	ND	8
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	3
1,4-Dichlorobenzene	ND	4
1,2-Dichlorobenzene	ND	3

ND-Not Detected. The limit of detection is reported above.



Client: LAW ENVIRONMENTAL, INC.  
 Job No: 12851  
 Date  
 Analyzed: 06-Jun-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @10'

Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	39	1.5
Toluene	120	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL  
Job No: 12851  
Date  
Analyzed: 06-JUNE-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @15'  
Matrix: SOIL  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	3.9	1.5
Toluene	47	1
Chlorobenzene	ND	8
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	3
1,4-Dichlorobenzene	ND	4
1,2-Dichlorobenzene	ND	3

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 12851  
Date  
Analyzed: 07-Jun-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @20'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	31	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	1	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL  
 Job No: 12851  
 Date  
 Analyzed: 06-JUNE-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @25'

Matrix: SOIL  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1
Benzene	ND	1.5
cis-1,3-Dichloropropylene	ND	4
2-Chloroethyl Vinyl Ether	ND	2.5
Bromoform	ND	1.5
Tetrachloroethylene	ND	1
Toluene	12	8
Chlorobenzene.	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	3
1,3-Dichlorobenzene	ND	4
1,4-Dichlorobenzene	ND	3
1,2-Dichlorobenzene	ND	

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
 Job No: 12851  
 Date  
 Analyzed: 07-Jun-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @30'

Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	44	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
 Job No: 12851  
 Date  
 Analyzed: 07-Jun-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @35'  
 Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	53	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
 Job No: 12851  
 Date  
 Analyzed: 07-Jun-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: B-2 @40'  
 Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1
Benzene	ND	1.5
cis-1,3-Dichloropropylene	ND	4
2-Chloroethyl Vinyl Ether	ND	2.5
Bromoform	ND	1.5
Tetrachloroethylene	ND	1
Toluene	17	4
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
 Job No: 12851  
 Date  
 Analyzed: 07-Jun-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: CB-1 @2.5  
 Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	3	1.5
Toluene	14	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.



Client: LAW ENVIRONMENTAL, INC.  
 Job No: 12851  
 Date  
 Analyzed: 07-Jun-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: CB-1 @6.5

Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	4	1.5
Toluene	28	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 12851  
Date  
Analyzed: 07-Jun-89  
Analysis: EPA 601/602 (8010/8020)

Sample: CB-2 @2.5'

Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
 Job No: 12851  
 Date  
 Analyzed: 07-Jun-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: CB-2 @6.5'  
 Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	7	1.5
Toluene	1	1
Chlorobenzene	ND	4
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
 Job No: 12851  
 Date  
 Analyzed: 07-Jun-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: LAB BLANK  
 Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	4	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	1.5	1
1,4-Dichlorobenzene	1.5	1
1,2-Dichlorobenzene	2	1

ND-Not Detected. The limit of detection is reported above.

1 of 2



**LAW ENVIRONMENTAL, INC.**  
 3420 N. San Fernando Blvd.  
 Suite 200  
 Burbank, California 91504  
 (818) 848-0214

# CHAIN OF CUSTODY RECORD

Lab Log Number

Client Name		Project Number		Analyses Required		Remarks
LAW ENVIRONMENTAL		58-9558		8010/8010/8010		
Project Name		Hawker-Pacific Environmental/ Assessmen <sup>t</sup>				
Report Attention		Sampled by NHR				
Warren Gross						
Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	
1	5/30/87	8:55 AM	SO	B-1 @ 5.0'	1	
2		9:05 AM		B-1 @ 10.0'	1	Please use HSM method for low detection limits. Include all QA/QC data required by the KACCB for AB-1803 investigations.
3		9:30 AM		B-1 @ 15.0'	1	
4		9:45 AM		B-1 @ 20.0'	1	
5		9:50 AM		B-1 @ 25'	1	
6		10:00 AM		B-1 @ 30'	1	
7		10:10 AM		B-1 @ 35'	1	
8		10:15 AM		B-1 @ 40'	1	
9		11:17 AM		B-2 @ 5'	1	
10		11:20 AM		B-2 @ 10'	1	
11		11:56 AM		B-2 @ 15'	1	
12		11:58 AM	✓	B-2 @ 20'	1	

Signature		Company		Date	Time
Relinquished by	<i>Rich Henry</i>	Law Environmental		5-31-87	2:00 pm
Received by	<i>Ken Hansen</i>	Reli-Express		5-31-87	2 pm
Relinquished by	<i>Ken Hansen</i>	" - "		5-31-87	2:50 pm
Received by	<i>April Richards</i>	WCAS	1012851	5-31-87	3:10 pm
Relinquished by					
Received by					

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

\*AO - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OI - Other



LAW ENVIRONMENTAL, INC.

3420 N. San Fernando Blvd.  
Suite 200  
Burbank, California 91504  
(818) 848-0214

# CHAIN OF CUSTODY RECORD

Lab Log Number

Client Name		LAW ENVIRONMENTAL		Project Number		58-9558	
Project Name		Hawker-Pacific - Environmental Assessment					
Report Attention		Sampled by HHH					
Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	Remarks	
13	5/30/87	11:40 A.M.	SO	B-2 @ 25'	1	X	
14		11:46 A.M.		B-2 @ 30'	1	X	
15		11:51 A.M.		B-2 @ 35'	1	X	
16		12:05 P.M.		B-2 @ 40'	1	X	
17		12:00 A.M.		CB-1 @ 2.5'	1	X	
18		1:30 A.M.		CB-1 @ 6.5'	1	X	
19		3:15 P.M.		CB-2 @ 2.5'	1	X	
20		3:35 P.M.		CB-2 @ 6.5'	1	X	

Signature		Company		Date		Time	
Relinquished by Phil Henry		Law Company		5-31-87		2 PM	
Received by La Hargreave?		Redi-Express		5-31-87		2 PM	
Relinquished by Phil Henry		"		5-31-87		2:50 PM	
Received by April Richards		WCAB		5-31-87		3:10 PM	
Relinquished by		No 12851					
Received by							

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made.  
Hazardous samples will be returned to client or disposed of at client expense.

\*AO - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

2 of 2

APPENDIX D

ANALYTICAL TEST RESULTS AND CHAIN-OF-CUSTODY  
OF SOIL SAMPLES

Tested by Regional Water Quality Control Board and  
California State Department of Health Services



To: Warren Gross

STATE OF CALIFORNIA  
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
Los Angeles Region  
107 South Broadway, Room 4027  
Los Angeles, California 90012-4596

The enclosed material is forwarded in response to your recent request. We are pleased to be of service. If there are any further questions, please contact:

MILA SILVESTRE

(213) 620-7930

30388-856 1-84 5M OSP



Analysis Request Form

Name of Sampler: Mila P. Silvestre Phone No: ( ATSS ) 640-4930  
 Sampler Employed By: ( 213 )-620-4930  
 R.W.Q.C.Board No. : ☒ 4 ☐ 6 ☐ 7 ☐ 8 ☐ 9

Sample Source: Hawker Pacific PSDS Locations

Date Collected : 5/30/89 Analysis Task No. 105-03 T2

Sample Type : ☐ Drinking water : ☐ Ground water ☐ Surface water  
☐ Waste water : Chlorinated : ☐ Yes ☐ No  
☒ Solid sample : ☒ Soil ☐ Sludge ☐ Sediment  
☐ Other

Use your own Bottle ID. No. for each bottle.

For Lab use Log Number	Bottle ID. No.	Sampling Point	Time collected	Type of Analysis required (Be Specific)
905-4841	B-1-10'	PSDS ①	9:00 AM	All samples to be run for : ① VOC's - EPA 8240 (5-10 µg/kg detection limits) ② Total Nitrogen - Nitrate - Nitrite - Ammonia - Organic N
905-4842	B-1-20'	PSDS ①		
905-4843	B-1-30'	PSDS ①		
905-4844	B-1-40'	PSDS ①		
905-4845	B-2-10'	PSDS ②		
905-4846	B-2-20'	PSDS ②		
905-4847	B-2-30'	PSDS ②		
905-4848	B-2-40'	PSDS ②	12:30 PM	

Warning or Special Instruction on Samples : None - Need sampling tubes back

Seals: <input checked="" type="checkbox"/> Intact <input type="checkbox"/> None <input type="checkbox"/> Broken	Date	Time
Samples Relinquished by <u>APB/ntu</u>	5/30/89	12:55 PM
Samples Relinquished by		
Received for Lab by <u>M. R. Padilla</u>	5-30-89	1 PM

(For Lab use only) Total cost for Lab analyses : \$ 2944

Laboratory Analytical Report

DATE REPORTED: 6-12-89

DATE RECEIVED: 5-30-89

SAMPLER: Mila Silvestre

Lab ID. Number	CONSTITUENT	EPA METHOD	STORET CODE	UNITS	ANALYSIS RESULTS	REPORTING LIMIT
905-4841	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	12.9	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	26.6	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	2.2	0.3
	Organic-Nitrogen	351.3		mg/Kg	5	0.5
905-4842	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	7.2	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	7	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	N.D.	0.3
	Organic-Nitrogen	351.3		mg/Kg	9	0.5
905-4843	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	6.6	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	3	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	N.D.	0.3
	Organic-Nitrogen	351.3		mg/Kg	6.6	0.5
905-4844	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	9.3	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	21.7	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	N.D.	0.3
	Organic-Nitrogen	351.3		mg/Kg	7.2	0.5
905-4845	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	7.5	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	3.6	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	2.4	0.3
	Organic-Nitrogen	351.3		mg/Kg	7.2	0.5
905-4846	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	6.6	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	4	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	N.D.	0.3
	Organic-Nitrogen	351.3		mg/Kg	4.8	0.5
905-4847	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	5.1	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	2.7	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	0.3	0.3
	Organic-Nitrogen	351.3		mg/Kg	8.1	0.5
905-4848	Ammonia-Nitrogen (NH3-N)	350.2	610	mg/Kg	4.8	0.5
	Nitrate-Nitrogen (NO3-N)	353.2		mg/Kg	4	2
	Nitrite-Nitrogen (NO2-N)	353.2		mg/Kg	N.D.	0.3
	Organic-Nitrogen	351.3		mg/Kg	5.1	0.5

N.D. = None detected.

mg/Kg= Milligram/Kilogram (ppm)

LAB SAMPLE ID NO.: 905-4841

DATE REPORTED : 6/6/89

SAMPLER :

All reporting units = ug/kg

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Acrolein	34210	NO
Acrylonitrile	34215	
Benzene	34030	
Bromodichloromethane	32101	
Bromoform	32104	
Bromomethane	34413	
Carbon tetrachloride	32102	
Chlorobenzene	34301	
Chloroethane	34311	
2-Chloroethylvinyl ether	34576	
Chloroform	32106	
Chloromethane	34418	
Dibromochloromethane	32105	
1,2-Dichlorobenzene	34536	
1,3-Dichlorobenzene	34566	
1,4-Dichlorobenzene	34571	
Dichlorodifluoromethane	34668	
1,1-Dichloroethane	34496	
1,2-Dichloroethane	34531	
1,1-Dichloroethylene	34501	
cis-1,2-Dichloroethylene	77093	
trans-1,2-Dichloroethylene	34546	
1,2-Dichloropropane	34541	
cis-1,3-Dichloropropylene	34704	
trans-1,3-Dichloropropylene	34699	
Ethyl benzene	34371	
Ethylene dibromide	77651	
Methylene chloride	34423	
Methyl Ethyl Ketone	81595	
Methyl Isobutyl Ketone	81596	
Styrene	77128	
1,1,2,2-Tetrachloroethane	34516	

LAB SAMPLE ID NO.: 905-4841

DATE REPORTED : 6/6/89

SAMPLER :

All reporting units = *14/62*

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb-

METHOD USED : EPA 8240

page 2 of 2

[illegible]

LAB SAMPLE ID NO.: 905-4842

DATE REPORTED : 6/6/89

SAMPLER :

All reporting units = ug/l

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ug/l

METHOD USED : EPA 8240

page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Acrolein	34210	ND
Acrylonitrile	34215	
Benzene	34030	
Bromodichloromethane	32101	
Bromoform	32104	
Bromomethane	34413	
Carbon tetrachloride	32102	
Chlorobenzene	34301	
Chloroethane	34311	
2-Chloroethylvinyl ether	34576	
Chloroform	32106	
Chloromethane	34418	
Dibromochloromethane	32105	
1,2-Dichlorobenzene	34536	
1,3-Dichlorobenzene	34566	
1,4-Dichlorobenzene	34571	
Dichlorodifluoromethane	34668	
1,1-Dichloroethane	34496	
1,2-Dichloroethane	34531	
1,1-Dichloroethylene	34501	
cis-1,2-Dichloroethylene	77093	
trans-1,2-Dichloroethylene	34546	
1,2-Dichloropropane	34541	
cis-1,3-Dichloropropylene	34704	
trans-1,3-Dichloropropylene	34699	
Ethyl benzene	34371	
Ethylene dibromide	77651	
Methylene chloride	34423	
Methyl Ethyl Ketone	81595	
Methyl Isobutyl Ketone	81596	
Styrene	77128	
1,1,2,2-Tetrachloroethane	34516	✓



LAB SAMPLE ID NO.: 905-4843

DATE REPORTED : 6/6/89

SAMPLER :

All reporting units = 14/89

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Acrolein	34210	NO
Acrylonitrile	34215	
Benzene	34030	
Bromodichloromethane	32101	
Bromoform	32104	
Bromomethane	34413	
Carbon tetrachloride	32102	
Chlorobenzene	34301	
Chloroethane	34311	
2-Chloroethylvinyl ether	34576	
Chloroform	32106	
Chloromethane	34418	
Dibromochloromethane	32105	
1,2-Dichlorobenzene	34536	
1,3-Dichlorobenzene	34566	
1,4-Dichlorobenzene	34571	
Dichlorodifluoromethane	34668	
1,1-Dichloroethane	34496	
1,2-Dichloroethane	34531	
1,1-Dichloroethylene	34501	
cis-1,2-Dichloroethylene	77093	
trans-1,2-Dichloroethylene	34546	
1,2-Dichloropropane	34541	
cis-1,3-Dichloropropylene	34704	
trans-1,3-Dichloropropylene	34699	
Ethyl benzene	34371	
Ethylene dibromide	77651	
Methylene chloride	34423	
Methyl Ethyl Ketone	81595	
Methyl Isobutyl Ketone	81596	
Styrene	77128	
1,1,2,2-Tetrachloroethane	34516	✓

LAB SAMPLE ID NO.:

DATE REPORTED :

**SAMPLER :**

All reporting units = 27/62

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 2 of 2

[illegible]



LAB SAMPLE ID NO.: 905-4844

DATE REPORTED : 6/6/89

SAMPLER :

All reporting units = ug/l

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Acrolein	34210	
Acrylonitrile	34215	
Benzene	34030	
Bromodichloromethane	32101	
Bromoform	32104	
Bromomethane	34413	
Carbon tetrachloride	32102	
Chlorobenzene	34301	
Chloroethane	34311	
2-Chloroethylvinyl ether	34576	
Chloroform	32106	
Chloromethane	34418	
Dibromochloromethane	32105	
1,2-Dichlorobenzene	34536	
1,3-Dichlorobenzene	34566	
1,4-Dichlorobenzene	34571	
Dichlorodifluoromethane	34668	
1,1-Dichloroethane	34496	
1,2-Dichloroethane	34531	
1,1-Dichloroethylene	34501	
cis-1,2-Dichloroethylene	77093	
trans-1,2-Dichloroethylene	34546	
1,2-Dichloropropane	34541	
cis-1,3-Dichloropropylene	34704	
trans-1,3-Dichloropropylene	34699	
Ethyl benzene	34371	
Ethylene dibromide	77651	
Methylene chloride	34423	
Methyl Ethyl Ketone	81595	
Methyl Isobutyl Ketone	81596	
Styrene	77128	
1,1,2,2-Tetrachloroethane	34516	

[illegible]

LAB SAMPLE ID NO.: 905-4845

DATE REPORTED : 6/6/89

SAMPLER :

All reporting units = mg/kg

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Acrolein	34210	ND
Acrylonitrile	34215	
Benzene	34030	
Bromodichloromethane	32101	
Bromoform	32104	
Bromomethane	34413	
Carbon tetrachloride	32102	
Chlorobenzene	34301	
Chloroethane	34311	
2-Chloroethylvinyl ether	34576	
Chloroform	32106	
Chloromethane	34418	
Dibromochloromethane	32105	
1,2-Dichlorobenzene	34536	
1,3-Dichlorobenzene	34566	
1,4-Dichlorobenzene	34571	
Dichlorodifluoromethane	34668	
1,1-Dichloroethane	34496	
1,2-Dichloroethane	34531	
1,1-Dichloroethylene	34501	
cis-1,2-Dichloroethylene	77093	
trans-1,2-Dichloroethylene	34546	
1,2-Dichloropropane	34541	
cis-1,3-Dichloropropylene	34704	
trans-1,3-Dichloropropylene	34699	
Ethyl benzene	34371	
Ethylene dibromide	77651	
Methylene chloride	34423	
Methyl Ethyl Ketone	81595	
Methyl Isobutyl Ketone	81596	
Styrene	77128	
1,1,2,2-Tetrachloroethane	34516	✓

LAB SAMPLE ID NO.: 905-4845

DATE REPORTED : 6/6/89

**SAMPLER :**

All reporting units = *mg/kg*

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 2 of 2

[illegible]

LAB SAMPLE ID NO.: 905-4846

DATE REPORTED : 6/6/89

SAMPLER :

All reporting units = ug/kg

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 1 of 2

CONSTITUENT	STORET CODE	ANALYSIS RESULTS
Acrolein	34210	ND
Acrylonitrile	34215	
Benzene	34030	
Bromodichloromethane	32101	
Bromoform	32104	
Bromomethane	34413	
Carbon tetrachloride	32102	
Chlorobenzene	34301	
Chloroethane	34311	
2-Chloroethylvinyl ether	34576	
Chloroform	32106	
Chloromethane	34418	
Dibromochloromethane	32105	
1,2-Dichlorobenzene	34536	
1,3-Dichlorobenzene	34566	
1,4-Dichlorobenzene	34571	
Dichlorodifluoromethane	34668	
1,1-Dichloroethane	34496	
1,2-Dichloroethane	34531	
1,1-Dichloroethylene	34501	
cis-1,2-Dichloroethylene	77093	
trans-1,2-Dichloroethylene	34546	
1,2-Dichloropropane	34541	
cis-1,3-Dichloropropylene	34704	
trans-1,3-Dichloropropylene	34699	
Ethyl benzene	34371	
Ethylene dibromide	77651	
Methylene chloride	34423	
Methyl Ethyl Ketone	81595	
Methyl Isobutyl Ketone	81596	
Styrene	77128	
1,1,2,2-Tetrachloroethane	34516	✓

LAB SAMPLE ID NO.: 905-4846

DATE REPORTED : 6/6/89

SAMPLER :

All reporting units = *mg/kg*

N.D. = None detected

Estimated Detection Limit For All Constituents = 5.0 ppb

METHOD USED : EPA 8240

page 2 of 2

[illegible]



**LAW ENVIRONMENTAL, INC.**

3320 N. SAN FERNANDO BLVD.  
BURBANK, CALIFORNIA 91504  
TEL. (818) 848-0214  
FAX (818) 848-1674

January 11, 1990

Hawker Pacific, Inc.  
11310 Sherman Way  
Sun Valley, CA 91352

Project No. 58-9661  
RWQCB File No. AB104.0436

Attention: Mr. Erik Johnson  
Hazardous Waste Engineer

Gentlemen:

Our "Report of Additional Subsurface Investigation, Private Sewage Disposal System and Industrial Waste Clarifier, 11310 Sherman Way, Sun Valley, California, for Hawker Pacific, Incorporated," is herewith submitted. This investigation was authorized by approval of our proposal for Project No. 58-9661, dated October 23, 1989, in response to the Regional Water Quality Control Board's requirement of additional subsurface investigation of the subject property.

Following your review of the attached report, one copy should be submitted to the RWQCB. Law Environmental appreciates the opportunity to provide our services for this project. Should you have any questions regarding our report, please do not hesitate to call our office.

Respectfully submitted,

**LAW ENVIRONMENTAL, INC.**

Michael H. Hernandez  
Staff Environmental Geologist

Warren W. Gross  
Staff Hydrogeologist

Glenn A. Brown, C.E.G. 3  
Senior Vice President

MHH/ks/9661.RPT  
(4 Copies Submitted)



REPORT OF ADDITIONAL SUBSURFACE INVESTIGATION  
PRIVATE SEWAGE DISPOSAL SYSTEM  
AND INDUSTRIAL WASTE CLARIFIER  
FOR  
HAWKER PACIFIC, INC.  
11310 SHERMAN WAY  
SUN VALLEY, CALIFORNIA

INTRODUCTION

This subsurface investigation was performed for Hawker Pacific, Inc. in order to comply with the requirements of the Regional Water Quality Control Board (RWQCB) as stated in their letter dated September 13, 1989 (Appendix A). Law Environmental's final Work Plan for the investigation was submitted to the RWQCB and subsequently approved by the Board in their letter dated November 17, 1989 (Appendix A).

Law Environmental has previously completed two subsurface investigations on the subject property for Hawker Pacific. The results of these investigations are included in our reports dated January 4, 1989 for Project No. 58-8601, and August 10, 1989 for Project No. 58-9558.

Our professional services have been performed using that degree of care and skill customarily exercised under similar circumstances by reputable environmental professionals practicing in this or equivalent localities. No other warranty, expressed or implied, is made as to the information or professional advice included in





this report. This report has been prepared expressly for Hawker Pacific, Inc. and is directed towards complying with their specific needs. This report has not been prepared for use by other parties and may not contain sufficient information for other parties or other uses. Any other use, interpretation or emphasis, other than that contained herein, is done at the reader's own risk.

All findings and conclusions derived from measurements or analyses of soil, water, air and soil gas are based on the conditions which existed only at those particular sample locations and the times of sampling. They are constrained by detection limits, equipment, and the specific analytical methods used.

#### **PURPOSE**

The purpose of this investigation was to determine if subsurface soils on the subject property have been contaminated by the leakage of selected organic and/or inorganic contaminants from the private sewage disposal systems (PSDS) or the industrial waste clarifier and, if so, to what extent area ground water may be threatened.

#### **SCOPE OF INVESTIGATION**

Two 80 foot soil borings were drilled adjacent to two private sewage disposal systems. One additional boring, terminated at a depth of 40 feet, was drilled at the location of the industrial



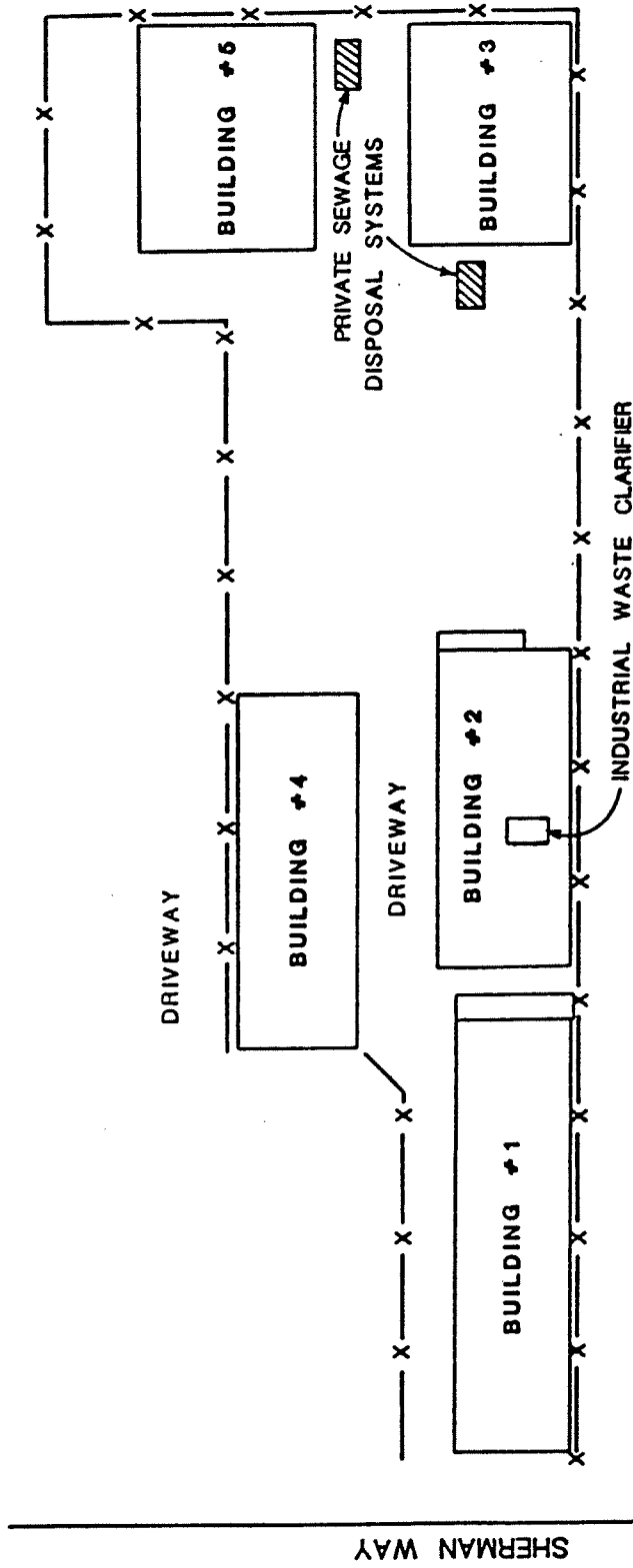
waste clarifier in Building 2 (Figure 1). Undisturbed soil samples were collected from the borings and submitted to a State-certified analytical laboratory, West Coast Analytical Service, Inc., for testing in accordance with RWQCB requirements. At the time of drilling, a RWQCB inspector was present to approve the boring locations, to observe the soil sampling protocol, and to collect split samples at selected depths in Borings CB-1D and 2D. The locations of pertinent features are shown on Figure 1, Site Map, and the site details in Figures 2 and 3.

#### **SUBSURFACE INVESTIGATIVE METHODS**

##### **Drilling and Sampling**

###### **Private Sewage Disposal System**

All field work was conducted on December 7, 1989. One soil boring was drilled at each of the two PSDS locations. These boring locations were the same as those selected for the borings of our previous investigation. The borings were designated as B-1D and B-2D. Each boring was completed to a depth of 80 feet at the locations shown on Figure 2, Site Detail, PSDS Locations. Soil samples were collected from the borings at five foot intervals, beginning at a depth of 45 feet. A truck mounted hollow stem auger drilling rig was employed for the borings. Soil samples were obtained according to procedures outlined in Appendix B, Soil



REFERENCE : BASE MAP BY  
HAWKER PACIFIC

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(APPROX)

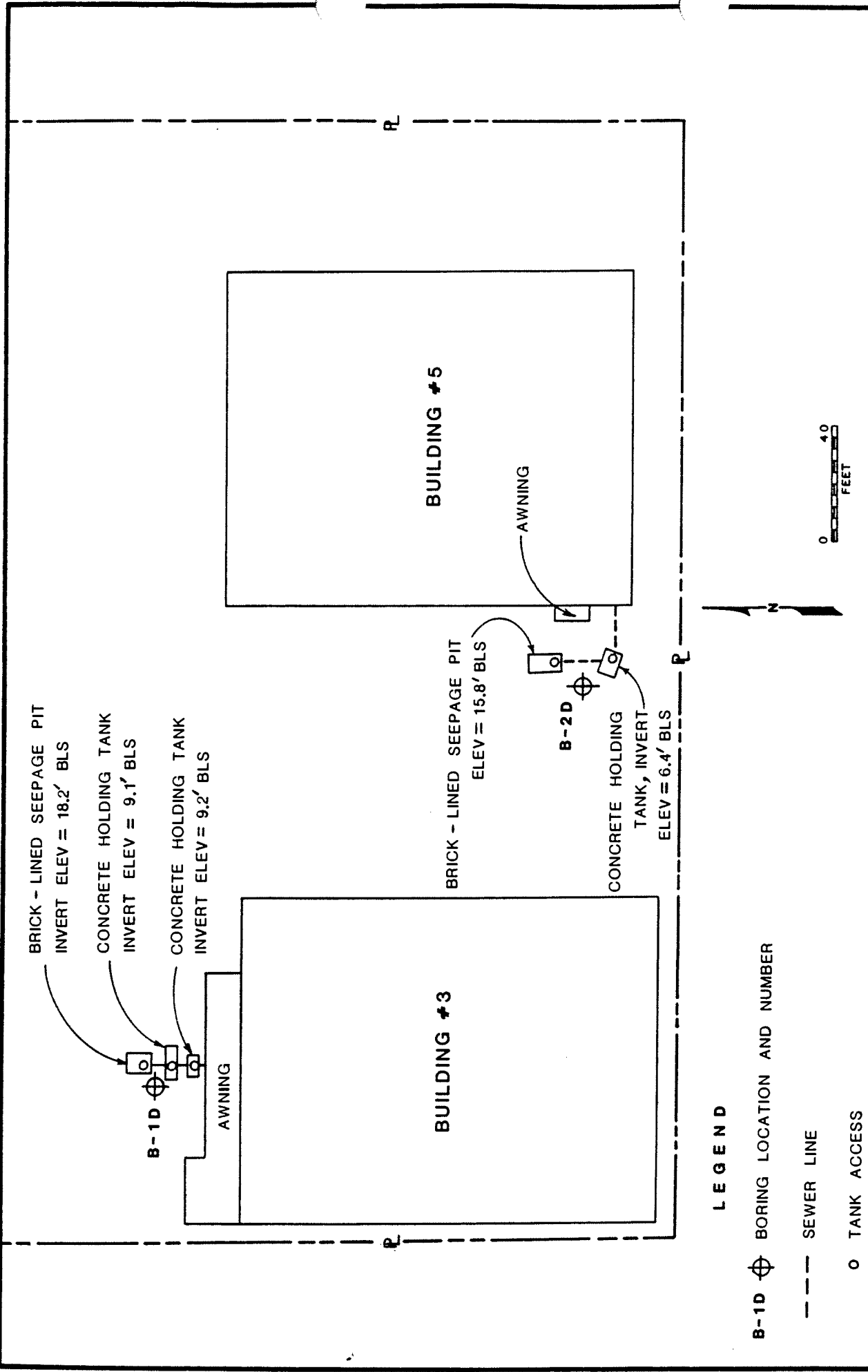
HAWKER PACIFIC


SITE MAP

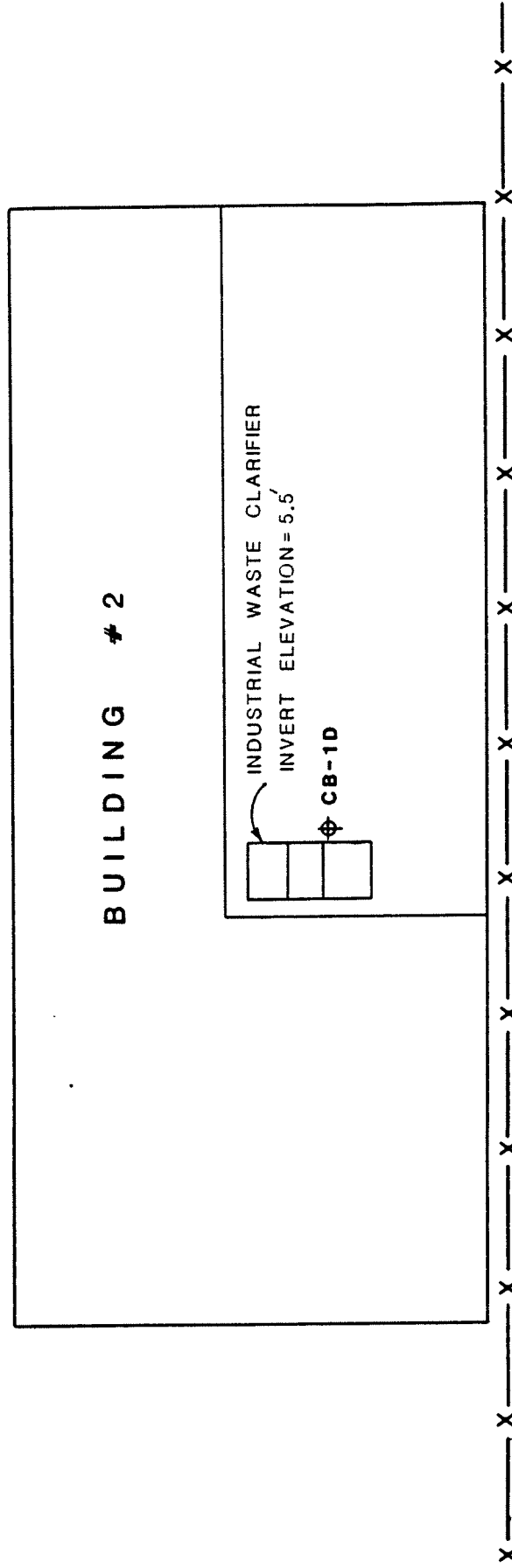


FIGURE 1

LAW ENVIRONMENTAL, INC.



 <p>FIGURE 2 LAW ENVIRONMENTAL, INC.</p>	<p><b>SITE DETAIL</b> <b>PSDS LOCATIONS</b></p>	<p><b>HAWKER PACIFIC</b></p>
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## LEGEND

**CB-1D** ~~Ø~~ BORING LOCATION AND NUMBER



**HAWKER PACIFIC**

# SITE DETAIL

## INDUSTRIAL WASTE CLARIFIER



FIGURE 3



Sampling Protocol. The sampling equipment was thoroughly washed and rinsed before each use. All augers were steam cleaned prior to use. The soil samples were obtained by driving a split-spoon California sampler into the soil ahead of the augers. A soil sample from each sample interval was screened using an organic vapor analyzer (a Foxboro OVA 108GC) to quantify organic vapor concentrations above a soil sample contained in a plastic sample bag. Samples were retained in brass tubes and capped with Teflon® liners and tight-fitting plastic lids secured with vinyl tape. The samples were labeled and placed in an iced cooler.

Borings CB-1D and CB-2D were not logged from 0 to 40 feet in this investigation. The boring logs from our previous investigation in which those intervals were logged are included in Appendix C.

The soil samples were delivered to West Coast Analytical Services in Santa Fe Springs, a State certified hazardous materials testing facility. Samples collected at 50, 60, 70 and 80 foot depths were submitted for analyses of volatile organic compounds (EPA Methods 8010/8020).

#### **Industrial Waste Clarifier**

One soil boring was drilled adjacent to the industrial waste clarifier at the location shown on Figure 3, Site Detail, Industrial Waste Clarifier. The boring was within two feet of the



clarifier at the same location as Boring CB-1 of our previous investigation. A cart mounted hollow stem auger drilling rig was employed for the borings. Soil samples were collected at five-foot intervals beginning at a depth of 10 feet. The sampling equipment was thoroughly washed and rinsed before each use. All augers were steam cleaned prior to use. Samples were obtained by driving a split-spoon California sampler into the soil to collect an undisturbed sample. A soil sample from each sample interval was screened using an organic vapor analyzer in the same manner as for the PSDS borings. All samples were secured and preserved using methods similar to those previously cited for the PSDS borings (see Appendix B). The soil samples were delivered to West Coast Analytical Services, Inc., where they were analyzed for volatile organic compounds (EPA Method 8010/8020).

## FINDINGS

### Private Sewage Disposal System

Alluvial soils were encountered in the PSDS borings, consisting of medium to coarse-grained sand and gravel with some cobbles. No soil staining, hydrocarbon odors, or elevated OVA readings were noted. Boring logs are included in Appendix C.

Free ground water was not encountered in either of the borings. Recent water levels in the area are reported to be approximately



219 feet below ground surface, according to the Los Angeles County Flood Control District (L.A.C.F.C.D. Well No. 3820B, measured in April, 1989).

Laboratory analysis of the soil samples collected from Boring B-1D and B-2D, adjacent to the two PSDS systems, did not indicate the presence of volatile organic compounds in the soil from a depth of 50 feet down to a depth of 80 feet. Analytical data for the two PSDS borings are contained in Appendix D.

#### **Industrial Waste Clarifier**

Two feet of silty sand fill were found to overlie alluvial soils consisting of medium to coarse-grained sands with gravel and some cobbles. No soil staining, hydrocarbon odors or elevated OVA readings were observed. The boring log is included in Appendix C.

In Boring CB-1D, adjacent to the waste clarifier, toluene was found to be present in one soil sample. Toluene was detected at 4.2  $\mu\text{g}/\text{kg}$  in the soil sample recovered from a depth of 35 feet; however, analysis of the laboratory blank samples detected the presence of toluene in all three blank samples at concentrations up to 2  $\mu\text{g}/\text{kg}$  (Appendix D). No other volatile organic compounds were detected in any of the samples collected from the industrial waste clarifier boring.





## CONCLUSIONS AND RECOMMENDATIONS

### Private Sewage Disposal System Locations

Based on the results of this subsurface investigation, it appears that the traces of toluene detected during the initial investigation do not extend into the deeper soil underlying the PSDS locations. Data from Law Environmental's initial subsurface investigation demonstrated that concentrations of toluene in the soil decreased fairly regularly with depth, extending down to 40 feet below ground surface. Data from the current investigation indicate that no toluene above laboratory detection limits are present in the soil samples from 50 to 80 feet below ground surface.

In view of recent ground water levels in the area of the site of approximately 219 feet below ground surface, and based on the results of this limited investigation, the two PSDS locations do not appear to pose a threat to the ground water beneath the site. We recommend no further investigation for the PSDS areas.

### Industrial Waste Clarifier

Based on the results of our investigation, it appears that the traces of toluene and tetrachloroethene (PCE) detected during the earlier investigation do not extend into the deeper soil beneath



the industrial waste clarifier in significant concentrations. Data from this investigation shows that no traces of PCE were encountered above laboratory detection limits in any of the soil samples recovered from depths of 10 to 40 feet in Boring CB-1D.

Toluene, at a concentration of 4.2  $\mu\text{g/kg}$  was encountered in one soil sample recovered from a depth of 35 feet. State action levels for toluene in drinking water are recognized as 100 mg/kg. No other volatiles were detected in any other soil samples taken from Boring CB-1D.

Based on our findings in this limited investigation and the reported depth to ground water in the area, we recommend no further investigation of the industrial waste clarifier.

-oOo-

**APPENDIX A**

**CORRESPONDENCE FROM THE  
REGIONAL WATER QUALITY CONTROL BOARD**

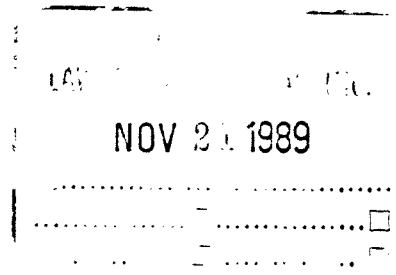
**LAW ENVIRONMENTAL WORK PLAN  
(Appendices not included)**

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—  
LOS ANGELES REGION

101 Centre Plaza Drive  
Monterey Park, California 91754-2156  
(213) 266-7500



November 17, 1989



Mr. Erik Johnson  
HAWKER PACIFIC, INC.  
11310 Sherman Way  
Sun Valley, CA 91352

SITE ASSESSMENT WORKPLAN - AB1803 WELL INVESTIGATION PROGRAM  
(FILE NO. AB104.0020)

We are in receipt of your consultant's, Law Environmental, Inc., report dated November 14, 1989, containing the site assessment workplan for your facility.

We have reviewed the workplan and have no objections to its implementation, provided that all work is completed as specified in the proposal. The final locations of the soil test borings will be verified in the field on the day of drilling.

Please notify us at least one week prior to the date you plan to commence work at your facility so we can schedule an inspector to be present. The final report containing the results of the site assessment is due to this Regional Board by January 18, 1990.

If you have any questions, please contact Ms. Mila Silvestre at (213) 266-7529.

*David A. Bacharowski*  
DAVID A. BACHAROWSKI  
Environmental Specialist IV

cc: ✓ Mr. Warren Gross, Law Environmental, Inc.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD—  
LOS ANGELES REGION

101 Centre Plaza Drive  
Monterey Park, California 91754-2156  
(213) 266-7500



September 13, 1989

Mr. Erik Johnson  
HAWKER PACIFIC, INC.  
11310 Sherman Way  
Sun Valley, CA 91352

SUBSURFACE INVESTIGATION - AB1803 WELL INVESTIGATION PROGRAM  
(FILE NO. AB104.0436)

Reference is made to your consultant's, Law Environmental, Inc., report dated August 10, 1989, containing the results of the subsurface investigation completed in the private sewage disposal system (PSDS) locations and in the industrial waste clarifier area at your facility.

We have reviewed and evaluated the information contained in the report, which has identified the presence of Toluene consistently with depth down to 40 feet below ground surface in the two PSDS locations. Further, Perchloroethylene and Toluene were identified to be present down to 6.5 feet below ground surface in the industrial waste clarifier area.

In order to further define the vertical extent of contamination beneath the areas of concern, you are required to develop a Site Assessment Workplan that includes the following:

1. A minimum of one (1) soil test boring to a depth of 80 ft below land surface in each of the two PSDS locations. Soil samples shall be taken at every 5-ft interval starting at 45 ft below land surface.
2. A minimum of one (1) soil test boring to a depth of 40 ft below land surface in the industrial waste clarifier area. Soil samples shall be taken at every 5-foot interval starting at 10 ft below land surface.
3. All soil samples shall be analyzed for Volatile Organic Compounds by EPA Method 8240 or EPA Methods 8010 & 8020.

Your Site Assessment Workplan containing all of the items identified above is due to this Regional Board by October 13, 1989. If you have any questions concerning this matter, please contact Mila P. Silvestre at (213) 266-7529.

A handwritten signature in cursive script that reads "David A. Bacharowski".

DAVID A. BACHAROWSKI  
Environmental Specialist IV

Mr. Erik Johnson  
Page 2

cc: Alisa Greene, U.S. EPA Region IX  
Bill Jones, L. A. County, Dept. of Health Services  
~~Warren Gross, Law Environmental, Inc.~~  
Publio Aliwalas, City of L. A., Bureau of Sanitation



LAW ENVIRONMENTAL, INC.

3320 N. SAN FERNANDO BLVD.  
BURBANK, CALIFORNIA 91504  
TEL. (818) 848-0214  
FAX (818) 848-1674

November 14, 1989

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Hawker Pacific, Inc.  
11310 Sherman Way  
Sun Valley, California 91352

Project No. 58-9661  
RWQCB File No. AB104.0436

Attention: Mr. Erik Johnson  
Hazardous Waste Engineer

Gentlemen:

**WORK PLAN**  
Additional Soil Borings  
Hawker Pacific, Inc.  
11310 Sherman Way  
Sun Valley, California

#### INTRODUCTION

Law Environmental, Inc. is pleased to submit this work plan to perform additional subsurface investigations at the above referenced property. This investigation was required by the Regional Water Quality Control Board (RWQCB) in their September 13, 1989 letter to Mr. Erik Johnson (RWQCB File No. AB104.0436) attached as Appendix c. This work plan addresses all elements of the required investigation. The results of previous subsurface investigation of the subject property by Law Environmental are contained in our report No. 58-8601, dated January 4, 1989 and our report No. 58-9558 dated August 10, 1989. The latter report detailed our finding of toluene in soils adjacent to the private



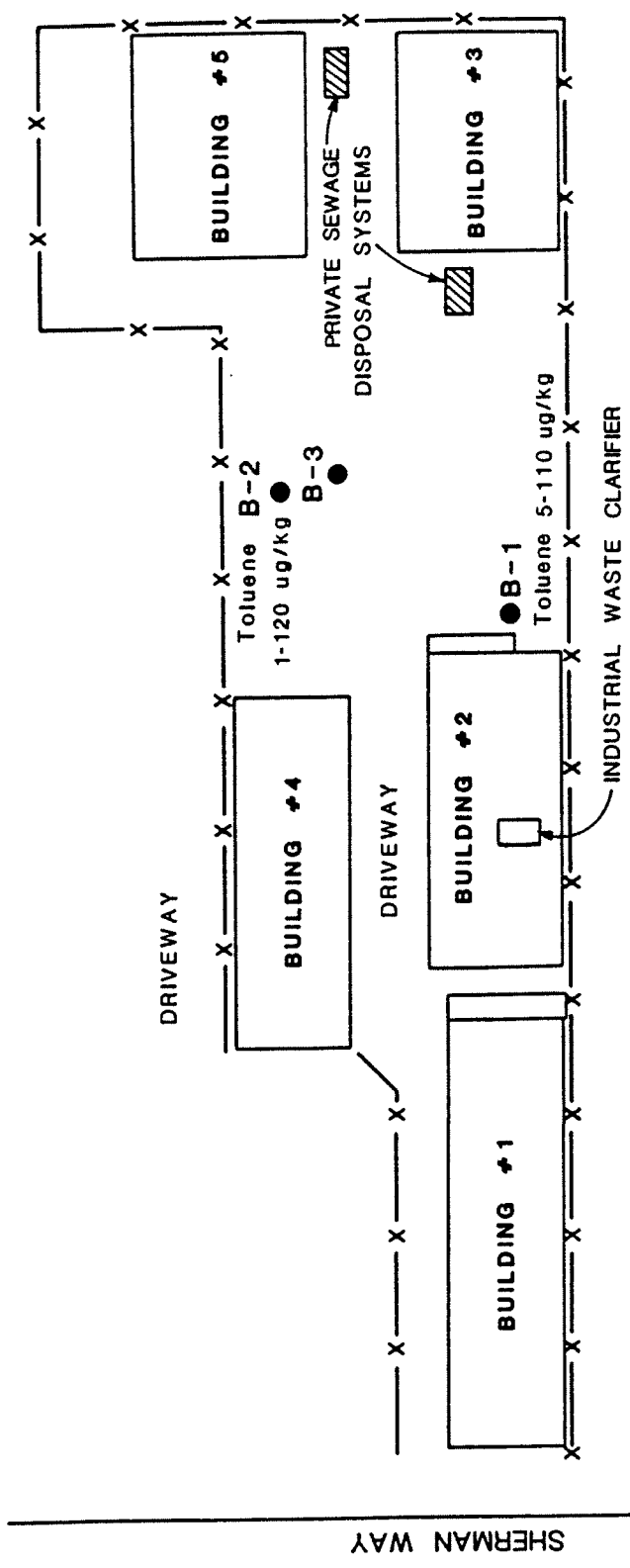
sewage disposal system (PSDS) installations at depths up to 40 feet (see Figures 1 and 2). Maximum concentrations of toluene, 110 and 120  $\mu\text{g/kg}$  were reported at the 10-foot depth, with concentrations declining to values of 11 and 53  $\mu\text{g/kg}$  at a depth of 40 feet. In addition, soil samples from shallow (6.5 feet) borings adjacent to the industrial waste clarifier were found to contain up to 28  $\mu\text{g/kg}$  toluene and up to 4  $\mu\text{g/kg}$  tetrachloroethylene (PCE) (see Figures 1 and 3).

The investigations presently required by the RWQCB include additional soil borings at the location of the PSDS and adjacent to the industrial waste clarifier in Building 2, with soil sampling to depths of 80 and 40 feet respectively.

#### HEALTH AND SAFETY PLAN

Law Environmental has prepared a site-specific health and safety plan for this investigation in accordance with RWQCB requirements. The plan is included in Appendix B. All field personnel will be required to sign on page 5 indicating that they have read, understand, and will comply with the requirements of the health and safety plan.





REFEREN' BASE MAP BY HAWKER PACIFIC

LEGEND

B-1 ● BORING LOCATION AND NUMBER

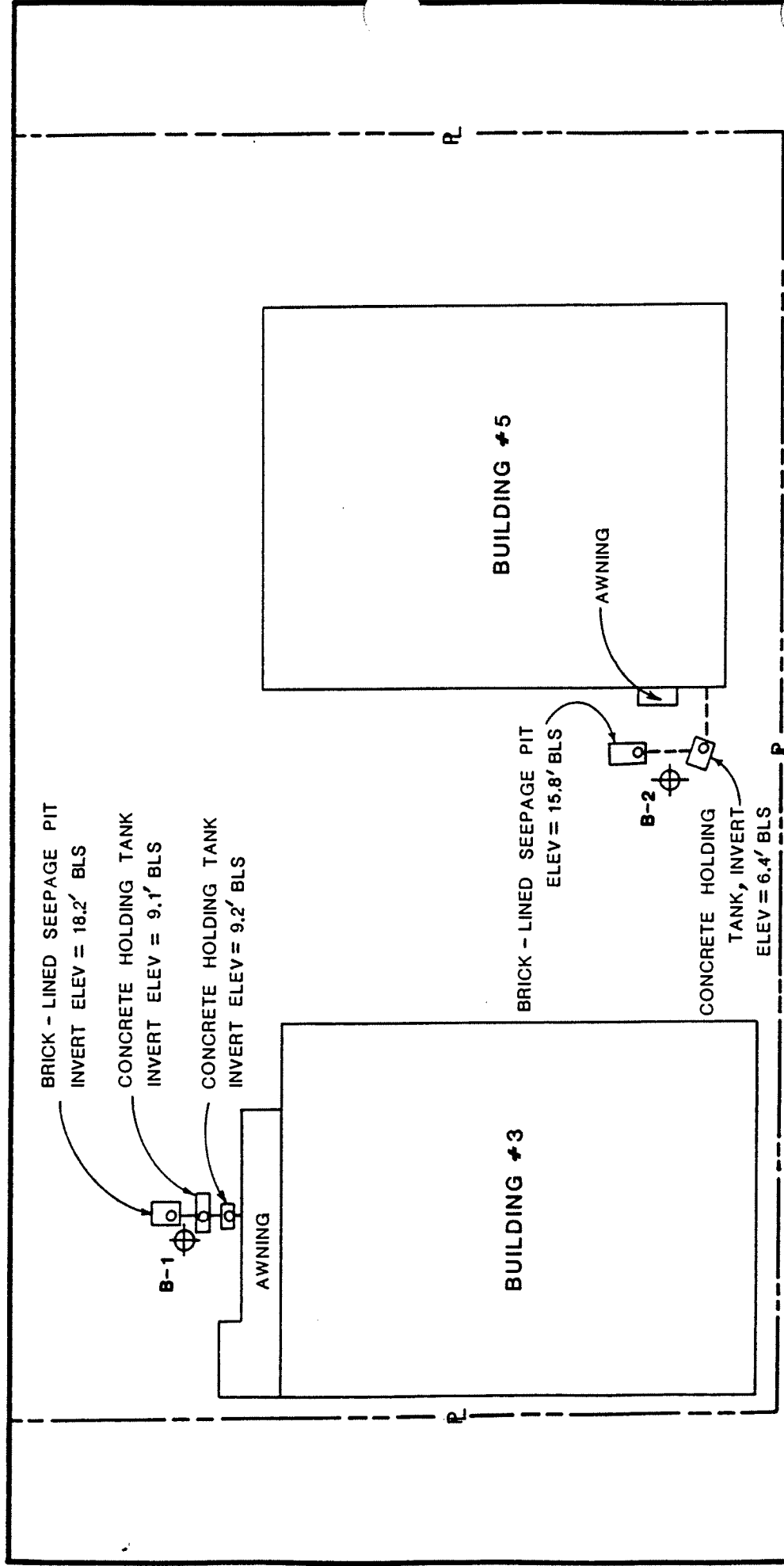
HAWKER PACIFIC

PLOT PL




FIGURE 2

LAW ENVIRONMENTAL, INC.



# LEGEND

- B-1  BORING LOCATION AND NUMBER
- SEWER LINE
- O TANK ACCESS

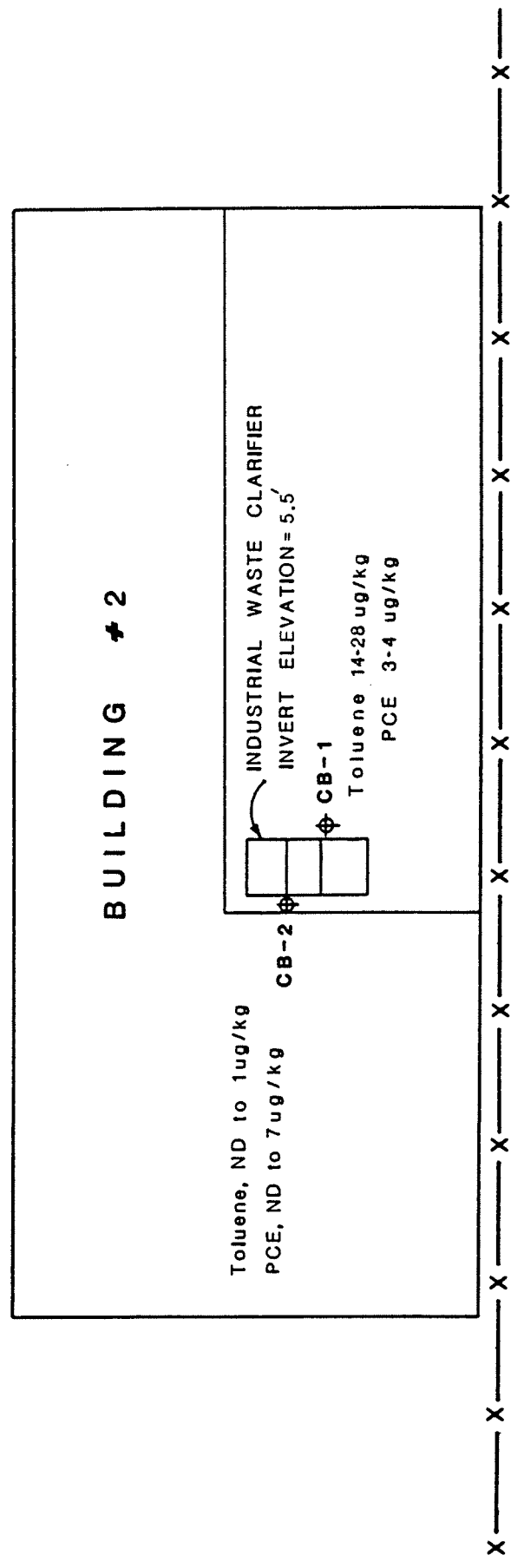
HAWKER PACIFIC

SITE DETAIL  
PSDS LOCATIONS




FIGURE 2


LAW ENVIRONMENTAL, INC.



**LEGEND**

**CB-1**  BORING LOCATION AND NUMBER



<b>HAWKER PACIFIC</b>	<b>SITE DETAIL</b> INDUSTRIAL WASTE CLARIFIER	 FIGURE 3 LAW ENVIRONMENTAL, INC.
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## PROPOSED SOIL SAMPLING AND ANALYSIS PROGRAM

### PSDS

The location of each PSDS is indicated on Figure 1, Site Map. Law Environmental will observe the drilling by a qualified drilling contractor, of one boring to a depth of 80 feet (or to auger refusal, whichever is first) at the location of each PSDS. The borings will be located as close as practical to our previous borings in these areas. Drilling will be accomplished by the hollow-stem auger method. Steam-cleaned augers will be used. Undisturbed soil samples will be collected at 5-foot intervals in each boring, unless precluded by cobble zones or unanticipated conditions. Soil samples from the 50, 60, 70 and 80-foot depths of each boring will be analyzed for selected volatile organic compounds by EPA Methods 8010 and 8020. Soil samples will not be tested for any additional parameters unless specifically requested by the client in writing. All RWQCB QA/QC requirements and detection limits will be specified. All soil samples will be monitored for the presence of volatile organic compounds using a portable organic vapor detector. Soil samples from depths other than those specified above which yield significant vapor readings will also be submitted for laboratory analysis. The borings will be logged and samples collected in accordance with the procedures specified in Appendix A, Soil Sampling Protocol.



## INDUSTRIAL WASTE CLARIFIER

One soil boring will be drilled adjacent to the clarifier at the location of our previous boring, CB-1, as shown on Figure 3. We will attempt to collect undisturbed soil samples at depths of 5, 10, 15, 20, 25, 30, 35 and 40 feet, as requested by the RWQCB. These samples will be analyzed for selected volatile organic compounds by EPA Methods 8010 and 8020.

Due to the limited access adjacent to the clarifier, we will utilize a hollow-stem auger drilling rig specially designed for indoor use. Soil samples will be collected in accordance with the procedure specified in Appendix A.

## REPORTING

Following receipt of the results of laboratory analyses we will submit a report of our findings and recommendations. The report will include all boring locations, boring logs, and laboratory reports.

- ooo -



If you have any questions regarding this work plan, please contact the undersigned. We will begin implementation of this work plan following your receipt of written approval from the RWQCB. We estimate that our report can be submitted within eight weeks of work plan approval.

Sincerely,

LAW ENVIRONMENTAL, INC.

Warren W. Gross  
Staff Environmental Geologist

Garabet H. Kassakhian, A.M., Ph.D.  
Manager Special Projects  
Senior Environmental Scientist

Glenn A. Brown, C.E.G. 3  
Senior Vice President

WWG/pr/9661WP.RPT  
(3 copies submitted)

**APPENDIX B**  
**SOIL SAMPLING PROTOCOL**

### SOIL SAMPLING PROTOCOL

The following procedures are followed when sampling soil with the hollow-stem auger drilling technique.

1. Continuous flight, hollow-stem augers are used.
2. All augers, samplers and downhole equipment are steam cleaned prior to use and between borings. This minimizes the possibility of cross-contamination occurring.
3. A registered geologist or other appropriately trained personnel observes the drilling, visually logs the soils, and obtains soil samples at appropriate intervals (usually 5 feet) as determined by field conditions.
4. The Unified Soils Classification System (USCS) is utilized to classify the soils. Rocks are classified according to the Colorado School of Mines "Classification of Rocks."
5. The soil samples are obtained using a modified California split-spoon sampler, which accommodates two to six sample tubes. Various tubes are utilized to accommodate the different analyses required:

Brass Tubes: 2 1/2 by 3 or 6 inches - for all organics and general analyses, excluding copper and zinc.



Stainless Steel Tubes: 2 1/2 by 3 or 6 inches - for all organics and metals analyses excluding chrome and nickel.

6. The tubes are scrubbed with a brush and TSP or equivalent cleaning agent, then rinsed with tap water. If required, the tubes are steam cleaned. Tubes are given a final rinse with distilled water and delivered to the drilling site in closed buckets or equivalent to preclude recontamination.
7. After the sample tubes are removed from the sampler, the latter is completely disassembled and scrubbed in TSP or equivalent and tap water. The sampler is rinsed with tap water, and distilled water (if required) and reassembled with the required number of clean tubes.
8. Unclean tubes are washed with TSP or equivalent solution, rinsed with tap water, etc. as described in 6 above.
9. In loose soils, a sand catcher is used to prevent soil from falling out of the sampler.
10. The sampler is driven 12 or 18 inches at each sampling. Generally, the lowest tube is retained for analysis. The other tube or tubes are retained for split sampling or as a back-up.

11. The sample is logged in. After testing for the presence of combustible gases or volatile organic compounds, the sample is capped with Teflon liners and tight-fitting plastic caps to minimize leaching and cross-contamination. Black vinyl electrical tape is used to tightly secure the caps to the sample tube. The samples are labeled and preserved in clean ice chests containing Blue Ice or equivalent, to keep the samples at or about 4 degrees Celsius.
12. The samples are kept in the ice chest until delivered to a State and EPA certified testing laboratory, the same day if physically possible. The undelivered samples are stored or archived in secured Law Environmental sample storage at or about 4 degrees Celsius. A freezer is also available at Law Environmental if freezing samples is required or recommended.
13. All samples are accompanied by a chain-of-custody form, documenting the time, date, and person-in-charge since retrieval of the sample from the sampler.
14. In case of visual and/or olfactory evidence of contamination, soil cuttings are impounded in drums carrying cautionary labels. The drums are secured from random contact. Custody of the drums and their content will remain with the client at all times.

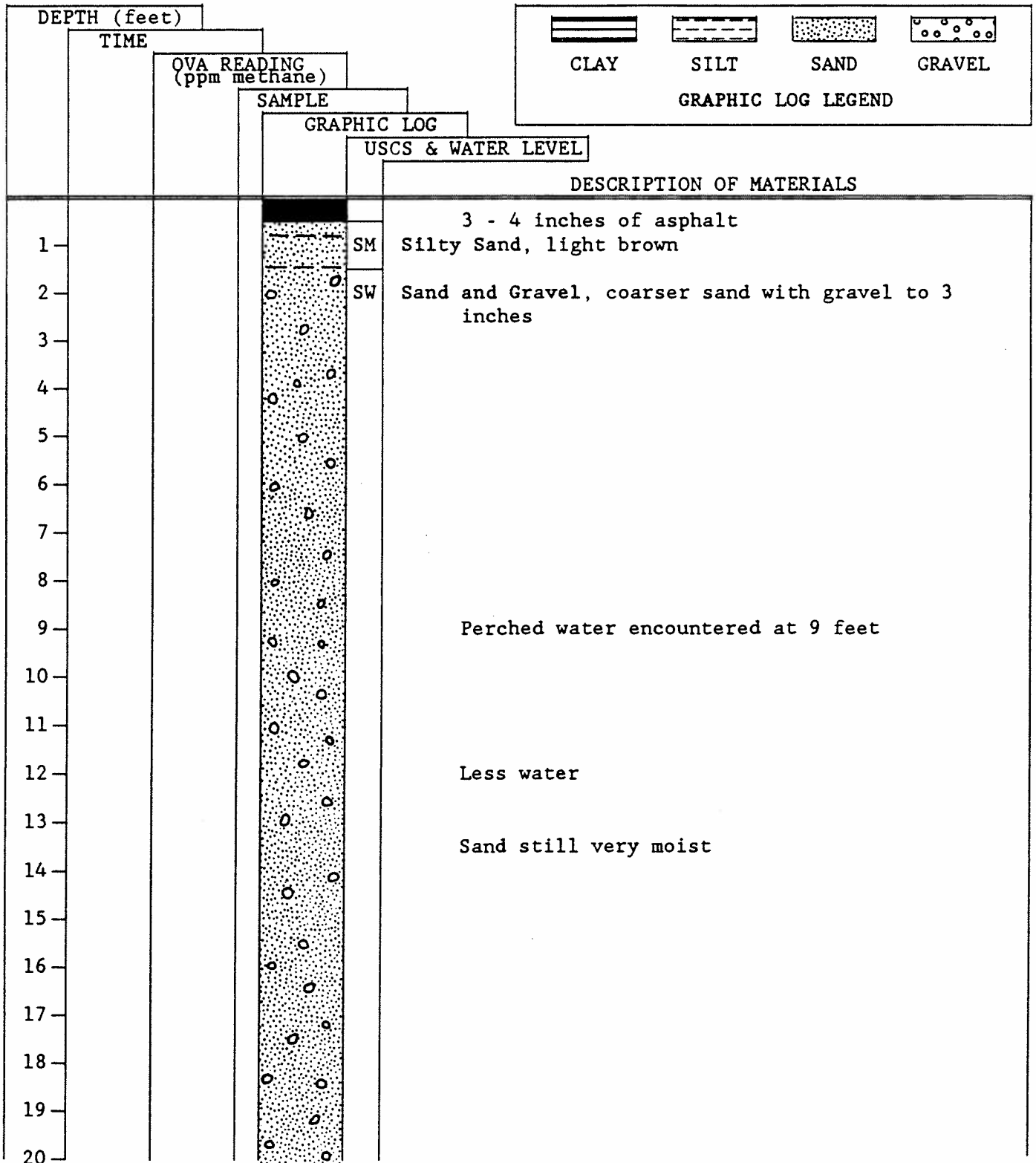
15. If chemical analysis of the soil indicates the presence of elevated levels of pollutants, then the Client will be informed of the test results and advised as to the lawful means of disposal or detoxification. Upon the written request and authorization by the Client, Law Environmental will organize the disposal or detoxification of the impounded soil in accordance with all applicable federal, state, county and local regulations.
16. The soil sample tube label includes:
  - Job Number
  - Boring Number and Depth
  - Sampling Date
  - Sampler's Initials
  - Test to be Performed (if known at the time of sampling).
17. An indelible marking pen or a ball-point pen is used to mark the sample tubes.
18. A detailed log is kept of all field activities.

**APPENDIX C**

**BORING LOGS**

# BORING LOG

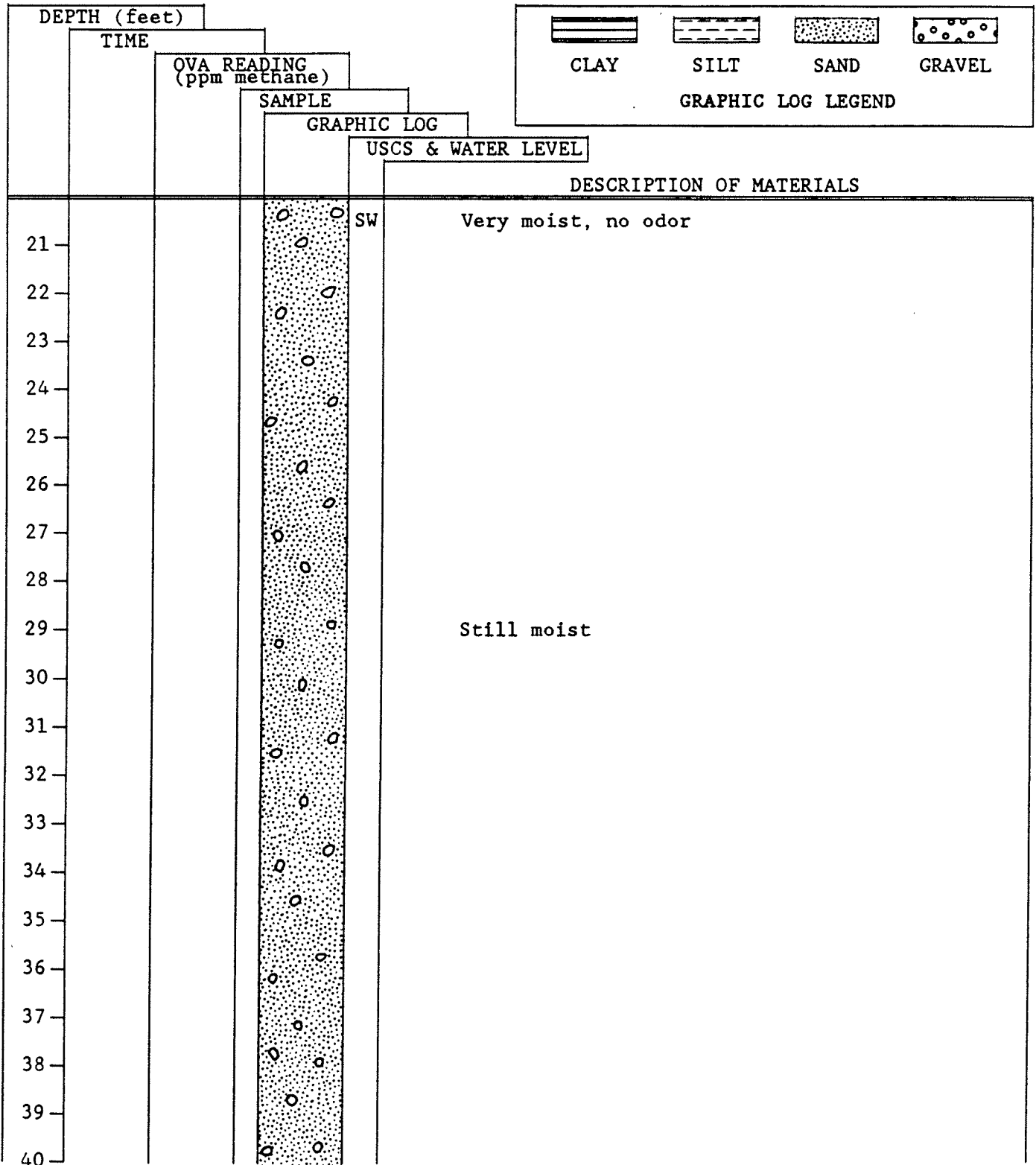
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 LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1D  
 DRILLED BY Datum Exploration PAGE 1 of 4  
 DRILLING METHOD Hollow Stem Flight Auger DATE 5/30/89  
 BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY MHH



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# BORING LOG

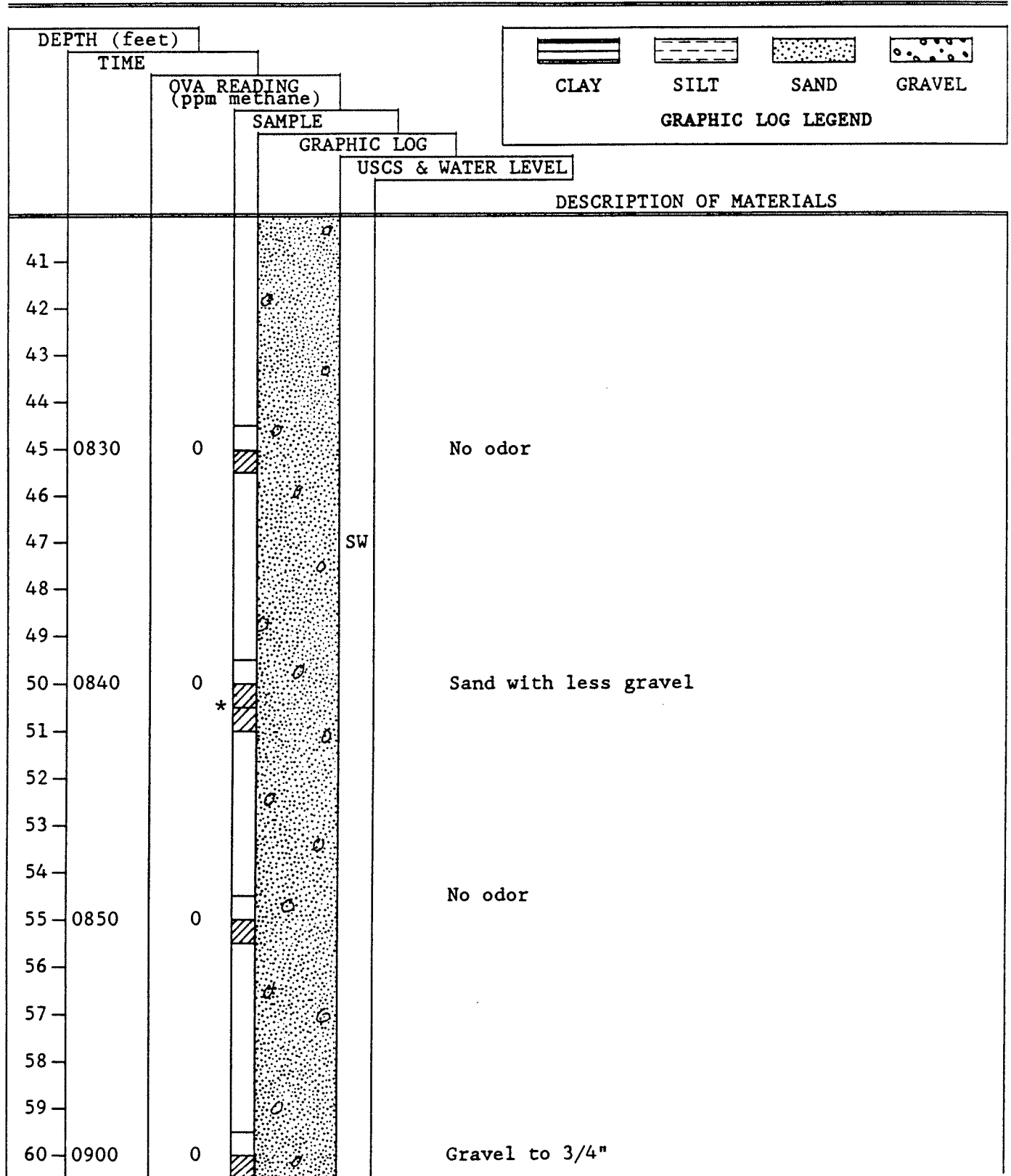
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 LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1D  
 DRILLED BY Datum Exploration PAGE 2 of 4  
 DRILLING METHOD Hollow Stem Flight Auger DATE 5/30/89  
 BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY MHH



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# BORING LOG

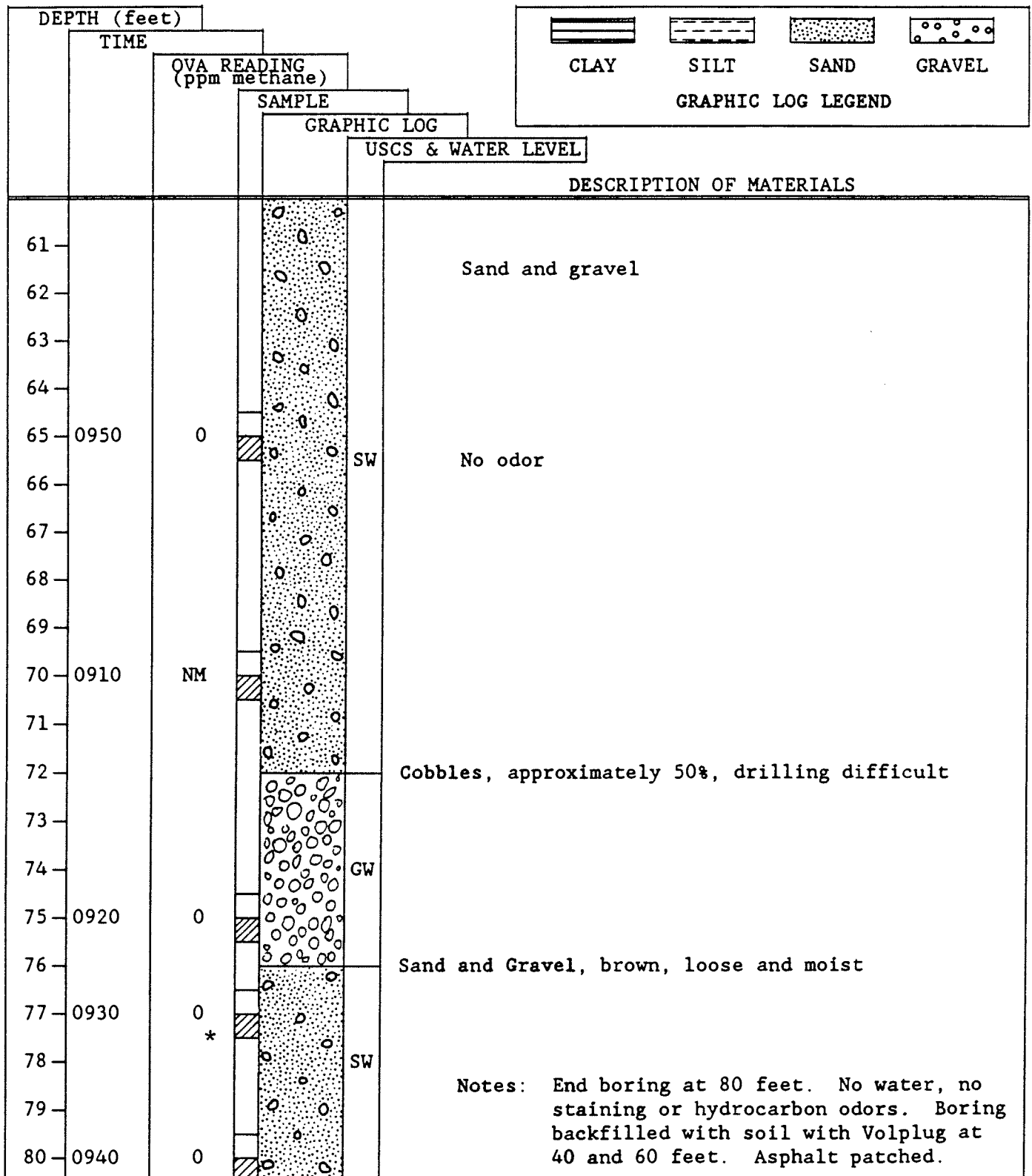
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661  
 LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-1D  
 DRILLED BY Datum Exploration PAGE 3 of 4  
 DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89  
 BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY WWG



\* Denotes sample preserved and given to RWQCB personnel (cont. on next page)

# BORING LOG

OWNER <u>Hawker-Pacific, Inc.</u>	PROJECT No. <u>58-9661</u>
LOCATION <u>11310 Sherman Way, Sun Valley, California</u>	BORING No. <u>B-1D</u>
DRILLED BY <u>Datum Exploration</u>	PAGE <u>4</u> of <u>4</u>
DRILLING METHOD <u>Hollow Stem Flight Auger</u>	DATE <u>12/07/89</u>
BOREHOLE DEPTH <u>80</u> feet	BOREHOLE DIA. <u>6</u> inches
LOGGED BY <u>WWG</u>	

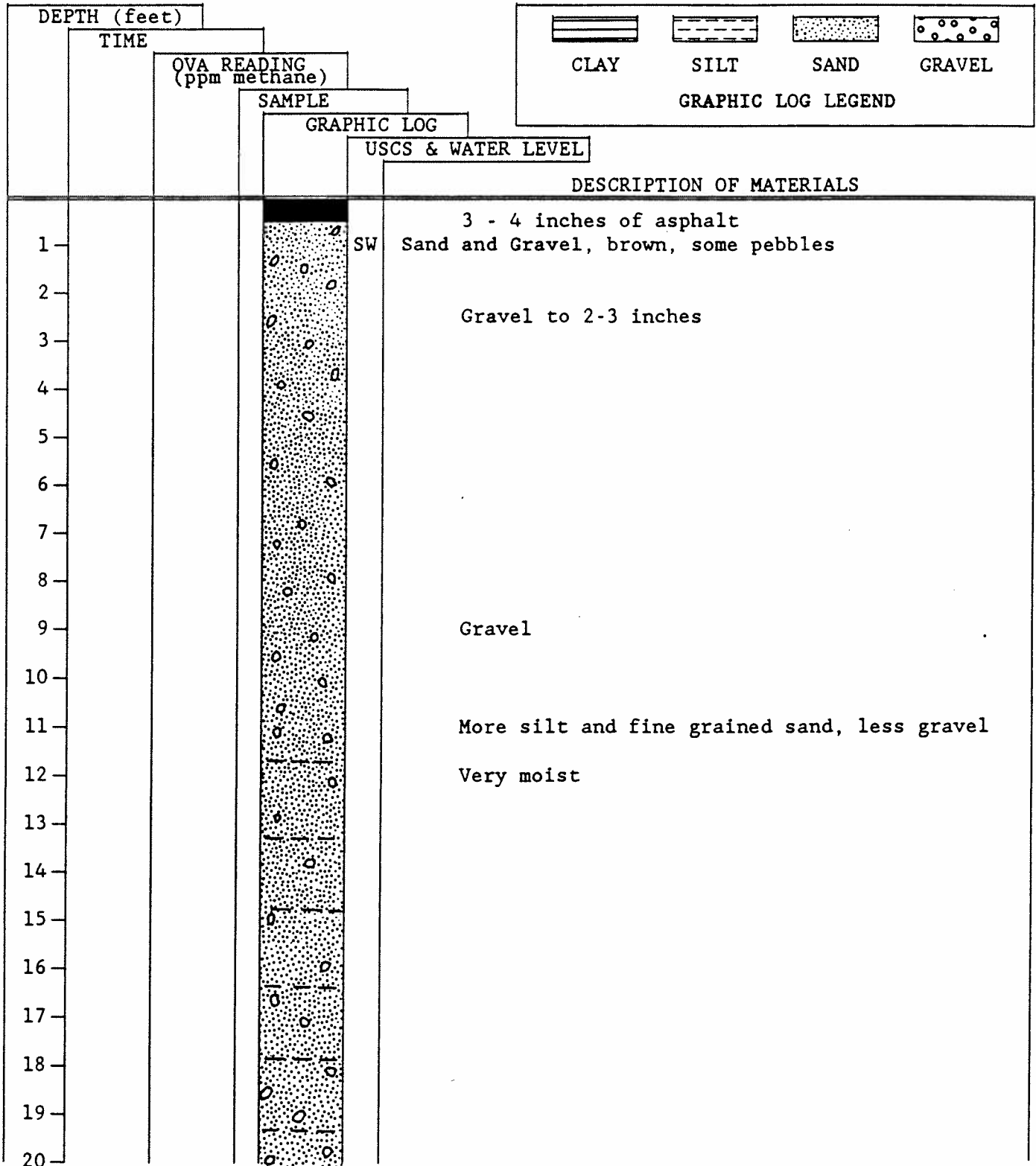


\* Denotes sample preserved and given to RWQCB personnel.



# BORING LOG

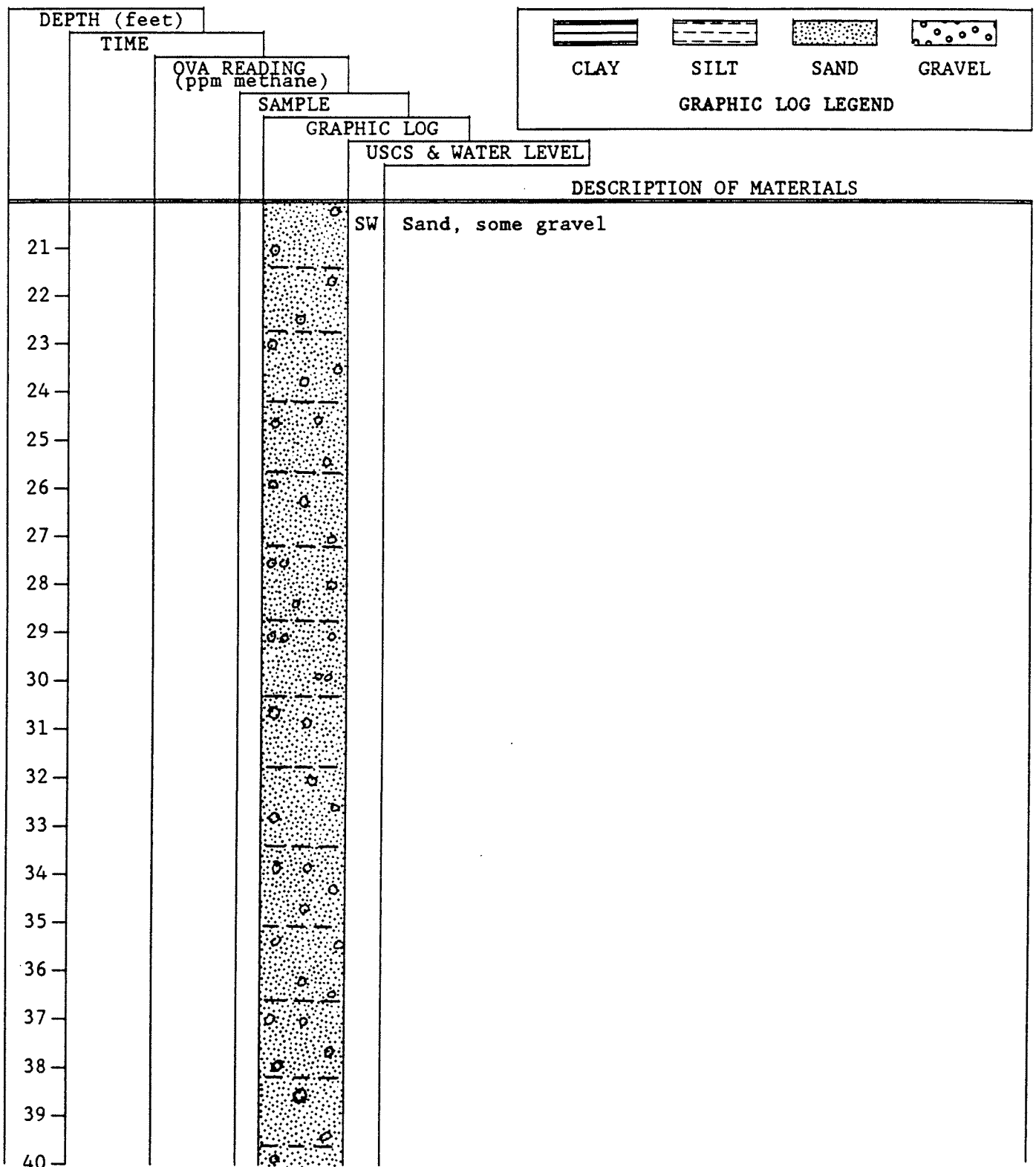
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661  
 LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-2D  
 DRILLED BY Datum Exploration PAGE 1 of 4  
 DRILLING METHOD Hollow Stem Flight Auger DATE 5/30/89  
 BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY MHH



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# BORING LOG

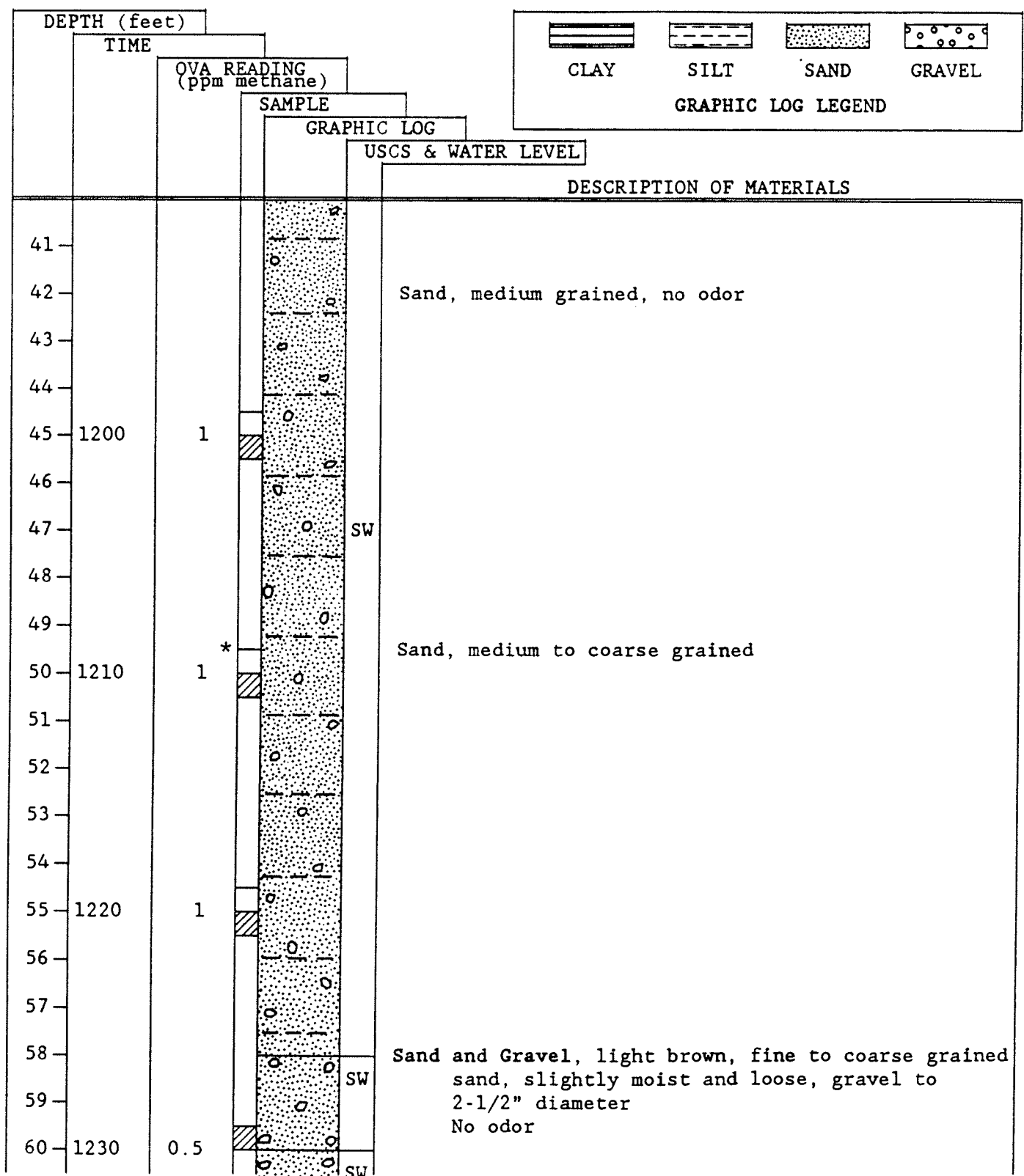
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 DRILLED BY Datum Exploration PAGE 2 of 4  
 DRILLING METHOD Hollow Stem Flight Auger DATE 5/30/89  
 BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY MHH



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## BORING LOG

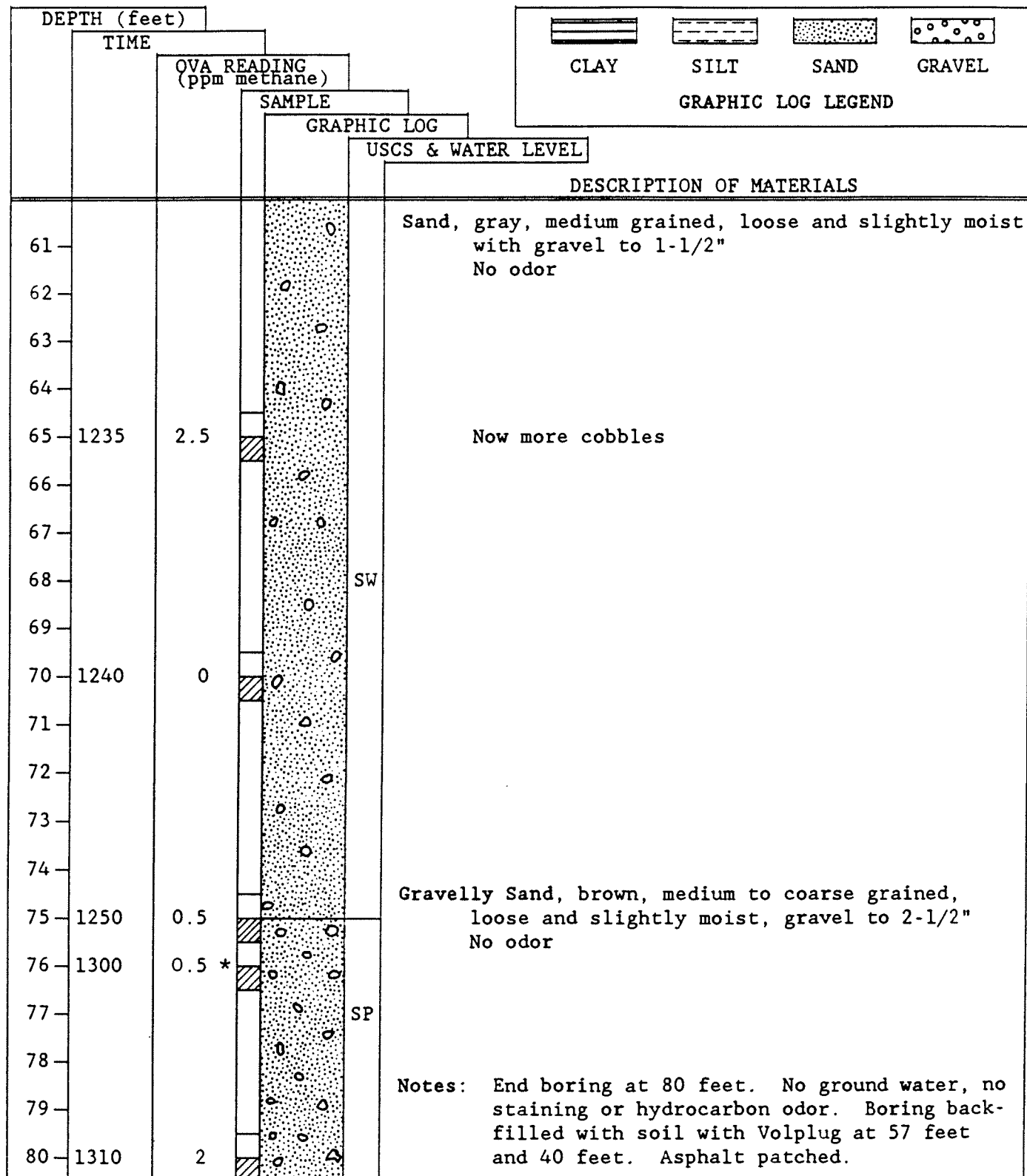
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661  
LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-2D  
DRILLED BY Datum Exploration PAGE 3 of 4  
DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89  
BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY WWG



\* Denotes sample preserved and given to RWQCB personnel (cont. on next page)

# BORING LOG

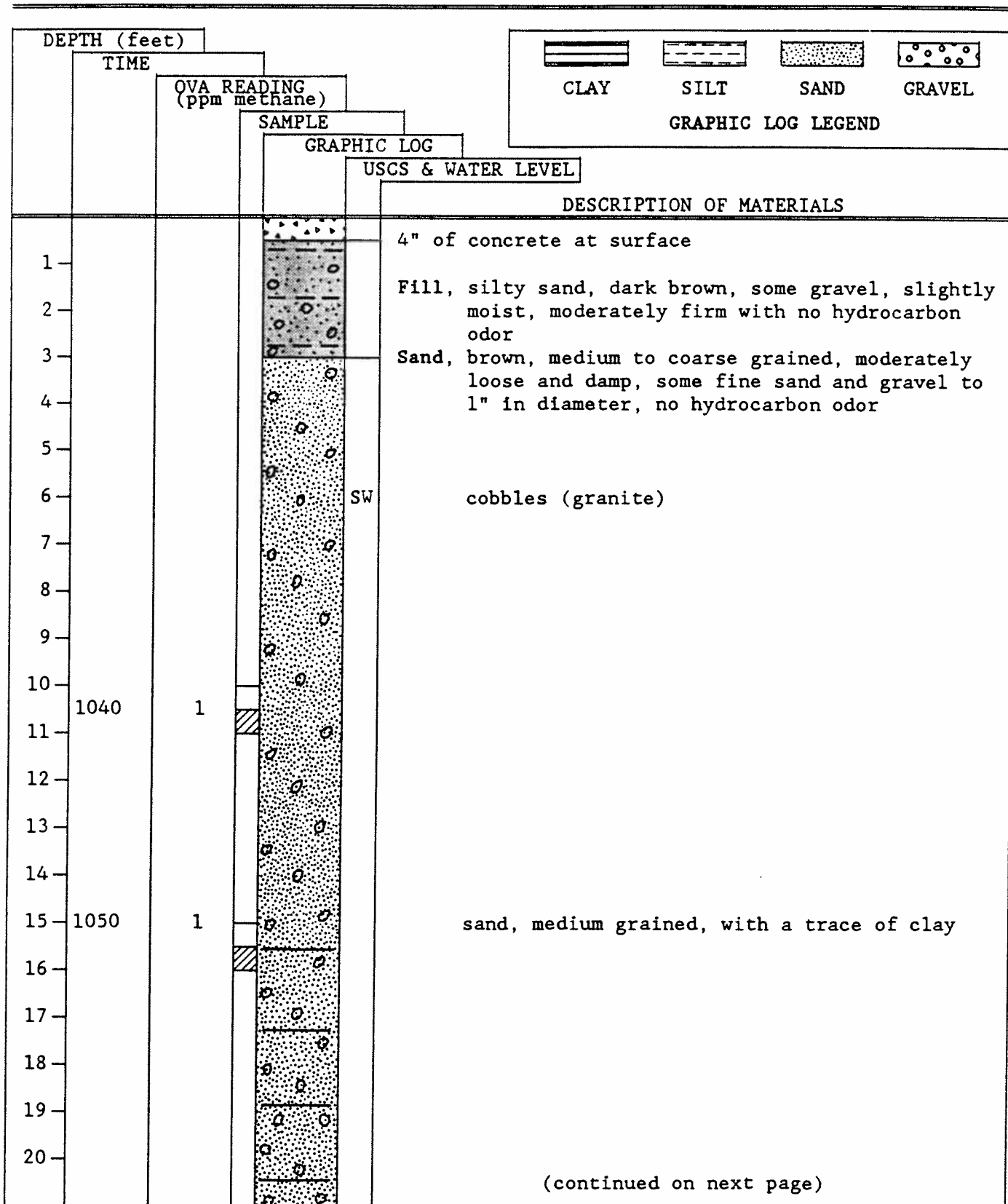
OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661  
 LOCATION 11310 Sherman Way, Sun Valley, California BORING No. B-2D  
 DRILLED BY Datum Exploration PAGE 4 of 4  
 DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89  
 BOREHOLE DEPTH 80 feet BOREHOLE DIA. 6 inches LOGGED BY WWG



\* Denotes sample preserved and given to RWQCB personnel.

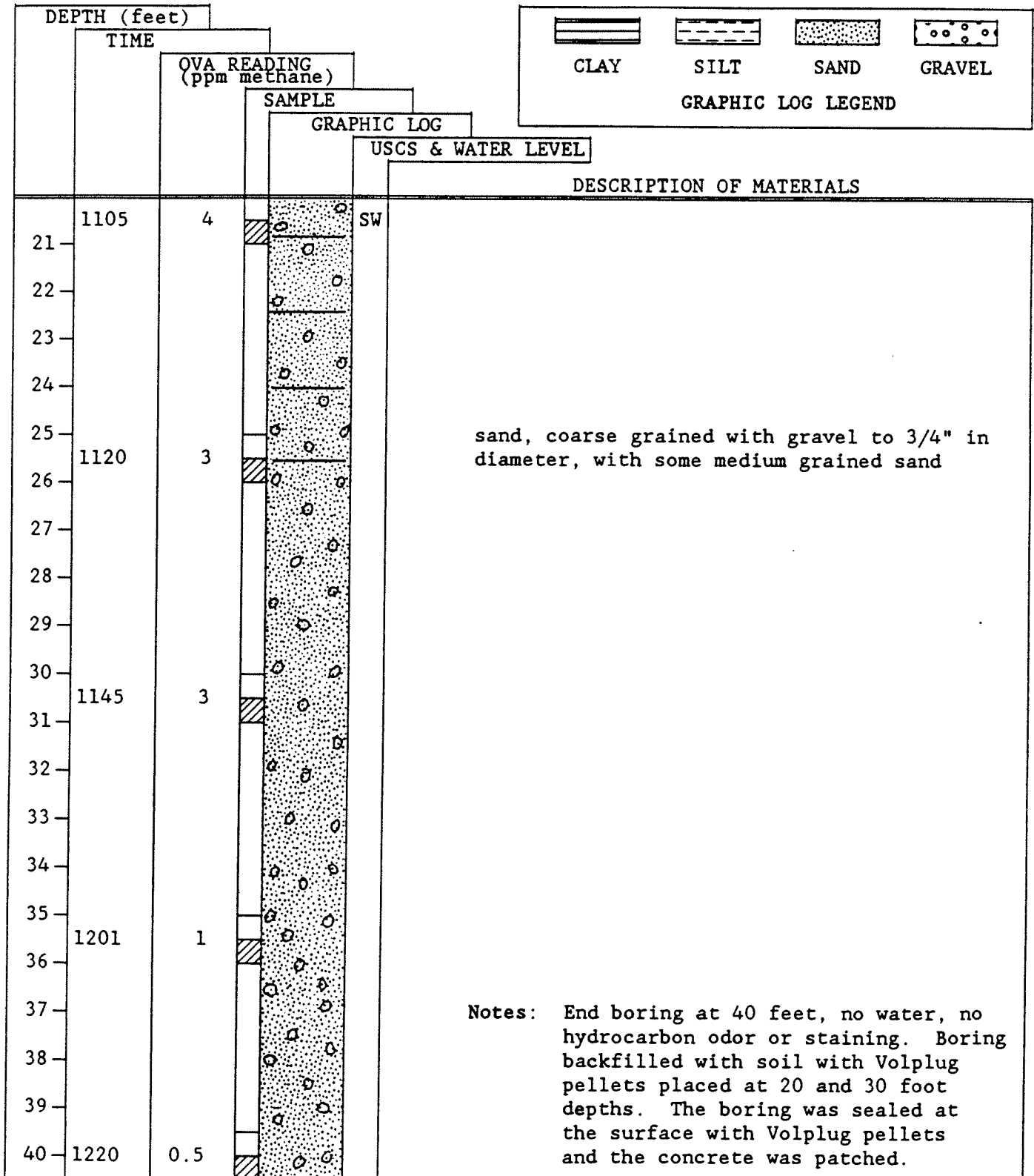
# BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661  
 LOCATION 11310 Sherman Way, Sun Valley, California BORING No. CB-1D  
 DRILLED BY Datum Exploration PAGE 1 of 2  
 DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89  
 BOREHOLE DEPTH 40 feet BOREHOLE DIA. 6 inches LOGGED BY WWG



# BORING LOG

OWNER Hawker-Pacific, Inc. PROJECT No. 58-9661  
 LOCATION 11310 Sherman Way, Sun Valley, California BORING No. CB-1D  
 DRILLED BY Datum Exploration PAGE 2 of 2  
 DRILLING METHOD Hollow Stem Flight Auger DATE 12/07/89  
 BOREHOLE DEPTH 40 feet BOREHOLE DIA. 6 inches LOGGED BY WWG



APPENDIX D

ANALYTICAL TEST RESULTS AND CHAIN-OF-CUSTODY  
OF SOIL SAMPLES

December 18, 1989

LAW ENVIRONMENTAL, INC.  
3420 N. San Fernando Blvd, Suite 200  
Burbank, CA 91504

Attn: Warren Gross

JOB NO. 14339

**WCAS**

**WEST COAST  
ANALYTICAL  
SERVICE, INC.**

ANALYTICAL CHEMISTS

A

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LABORATORY REPORT

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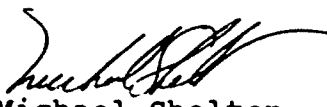
Samples Received: Twenty-three (23) soils  
Date Received: 12-8-89  
Purchase Order No: Proj#: 58-9661/Hawker Pacific

The samples were analyzed as follows:


<u>Samples Analyzed</u>	<u>Analysis</u>	<u>Results</u>
Fifteen (15) soils	Halogenated and Aromatic Volatile Organics by EPA 8010/8020	Data Sheets
One (1) soil	Matrix Spike/Matrix Spike Duplicate by EPA 8010/8020	Data Sheet

Page 1 of 1

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Michael Shelton  
Senior Chemist

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B. Michael Hovanec  
Senior Staff Chemist

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Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 13-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-1D @ 50'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 13-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-1D @ 60'

Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 13-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-1D @ 70'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 13-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-1D @ 80'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	2
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 13-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-2D @ 50'

Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 14-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-2D @ 60'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 14-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-2D @ 70'

Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 14-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: B-2D @ 80'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.



Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 14-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 10'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 14-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 15'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 14-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 20'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 14-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 25'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	3
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 14-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 30'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
 Job No: 14339  
 Date  
 Analyzed: 14-Dec-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 35'

Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	4.2	1
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL, INC.  
Job No: 14339  
Date  
Analyzed: 14-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: CB-1D @ 40'  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	ND	1
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL  
Job No: 14339  
Date  
Analyzed: 14-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: LAB BLANK  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	1	1
Chlorobenzene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.



Client: LAW ENVIRONMENTAL  
 Job No: 14339  
 Date  
 Analyzed: 14-Dec-89  
 Analysis: EPA 601/602 (8010/8020)

Sample: LAB BLANK  
 Matrix: Soil  
 Samp Amt: 1 gm  
 Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	2	1
Chlorobenzene	3	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.

Client: LAW ENVIRONMENTAL  
Job No: 14339  
Date  
Analyzed: 13-Dec-89  
Analysis: EPA 601/602 (8010/8020)

Sample: LAB BLANK  
Matrix: Soil  
Samp Amt: 1 gm  
Dil Fact: 1

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	5
Bromomethane	ND	5
Vinyl Chloride	ND	3
Chloroethane	ND	5
Methylene Chloride	ND	25
1,1-Dichloroethylene	ND	3
1,1-Dichloroethane	ND	2
trans-1,2-Dichloroethylene	ND	1.5
Trichlorofluoromethane	ND	2
Chloroform	ND	1.5
1,2-Dichloroethane	ND	2
1,1,1-Trichloroethane	ND	1.5
Carbon Tetrachloride	ND	1.5
Bromodichloromethane	ND	1.5
1,1,2,2-Tetrachloroethane	ND	1.5
1,2-Dichloropropane	ND	1.5
trans-1,3-Dichloropropylene	ND	1.5
Trichloroethylene	ND	1.5
Dibromochloromethane	ND	1.5
1,1,2-Trichloroethane	ND	1.5
Benzene	ND	1
cis-1,3-Dichloropropylene	ND	1.5
2-Chloroethyl Vinyl Ether	ND	4
Bromoform	ND	2.5
Tetrachloroethylene	ND	1.5
Toluene	2	1
Chlorobenzene	2	1
Ethylbenzene	ND	1
Total Xylenes	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
1,2-Dichlorobenzene	ND	1

ND-Not Detected. The limit of detection is reported above.



LAW ENVIRONMENTAL, INC.  
3420 N. San Fernando Blvd.  
Suite 200  
Burbank, California 91504  
(818) 848-0214

# CHAIN OF CUSTODY RECORD

Lab Log Number

Client Name <i>Hawker Pacific</i>		Project Number <i>58-9661</i>					
Project Name		Analyses Required					
Report Attention <i>Warren Gross</i>		Sampled by <i>Warren Gross</i>					
Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	Remarks	
1	12/7/89	0830	50	B-1 D @ 45'	✓	✓	A Please use methods to obtain low detection limits required by RWQCB AB1803 program and include with report the QA/QC package required by the RWQCB
2		0840		50'	✓	✓	
3		0850		55'	✓	✓	
4		0900		60'	✓	✓	
5		0905		65'	✓	✓	
6		0910		70'	✓	✓	
7		0920		75'	✓	✓	
8		0940		80'	✓	✓	
9		1200		B-2 D @ 45'	✓	✓	
10		1210		50'	✓	✓	
11		1220		55'	✓	✓	
12		1230		60'	✓	✓	

Signature

Company

Date

Time

Relinquished by <i>Warren Gross</i>	Law Environmental, Inc.	12/8/89	8:55 AM
Received by <i>Bill DeBry</i>	Reddy's	12/8/89	10:00 AM
Relinquished by			
Received by <i>Mary Caldwell</i>	WECS	12-8	11:50
Relinquished by			
Received by			

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

\*AQ - Aqueous; MA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

14334



LAW ENVIRONMENTAL, INC.  
3420 N. San Fernando Blvd.  
Suite 200  
Burbank, California 91504  
(818) 848-0214

## CHAIN OF CUSTODY RECORD

Lab Log Number

Client Name		Project Number		Analyses Required		Remarks
Hawker Pacific		58-9661				
Report Attention		Sampled by				
Warren Gross		Warren Gross				
Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	
13	11/7/89	1235	SO	B-2.D @ 65' ✓	1	
14		1240		GRV @ 70' ✓	1	
15		1250		GRV @ 75' ✓	1	
16		1310		GRV @ 80' ✓	1	
17		1040		CB @ 10' ✓	1	
18		1050		GRV @ 15' ✓	1	
19		1105		GRV @ 20' ✓	1	
20		1120		GRV @ 25' ✓	1	
21		1145		GRV @ 30' ✓	1	
22		1205		GRV @ 35' ✓	1	
23		1220		GRV @ 40' ✓	1	

Signature

Company

Date

Time

Relinquished by	Warren W. Gross	Low Environmental, Inc.	12/8/89	1000
Received by	Bob DeBuy		12/8/89	1000
Relinquished by				
Received by	Mary Cadenhall			
Relinquished by			12/8	11:50
Received by				A.M.

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made.  
Hazardous samples will be returned to client or disposed of at client expense.

\*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OT - Other

14339



### BACKGROUND

A preliminary subsurface investigation was conducted at the site in June 1990 (Active Leak Testing, Inc. [ALT], Hawker Pacific), to determine the presence of contamination from a small (approximately 200 gallon) underground storage tank. A geophysical survey at the site was conducted by Spectrum E.S.I. in August 1990. The survey indicated that the tank was four feet in length, four feet in diameter, and at one time contained waste oil. The tank was located within a concrete containment area at the west end of the alley. A sump, one foot by one foot by three feet deep, was discovered during this investigation.

During the ALT investigation, three borings (B-1, B-2 and B-3) were drilled in the area of the underground storage tank and the sump. Borings B-1 and B-2, located adjacent to the underground storage tank, were slant-drilled and completed to a depth of 20 feet. Boring B-3, located adjacent to the sump, was slant-drilled to a depth of 15 feet. All samples were tested for total recoverable hydrocarbons (EPA Method 418.1) and one sample (Boring B-3 at five feet) was analyzed for purgeable organics (EPA Method 8240). Table 1 presents the analytical laboratory results of the soil samples.



**TABLE 1**  
**RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES**  
**FOR TOTAL RECOVERABLE HYDROCARBONS AND PURGEABLE ORGANICS**  
**FROM ALT REPORT, JUNE 1990**

SAMPLE NUMBER AND DEPTH	TRH (ppm)	1,1,1-TCA (ppb)	TCE (ppb)	TOLUENE (ppb)	PCE (ppb)	TOTAL XYLENES (ppb)
B-1 @ 15'	36.3	NT	NT	NT	NT	NT
B-1 @ 20'	36.3	NT	NT	NT	NT	NT
B-2 @ 15'	220	NT	NT	NT	NT	NT
B-2 @ 20'	136	NT	NT	NT	NT	NT
B-3 @ 1'	38,637	NT	NT	NT	NT	NT
B-3 @ 3'	22,251	NT	NT	NT	NT	NT
B-3 @ 5'	3,245	6.6	19.2	550,000	555,000	584
B-3 @ 10'	17,104	NT	NT	NT	NT	NT
B-3 @ 15'	354	NT	NT	NT	NT	NT

TRH = Total Recoverable Hydrocarbons  
 1,1,1-TCA = 1,1,1-Trichloroethane  
 TCE = Trichloroethene  
 PCE = Tetrachloroethene  
 NT = Not Tested

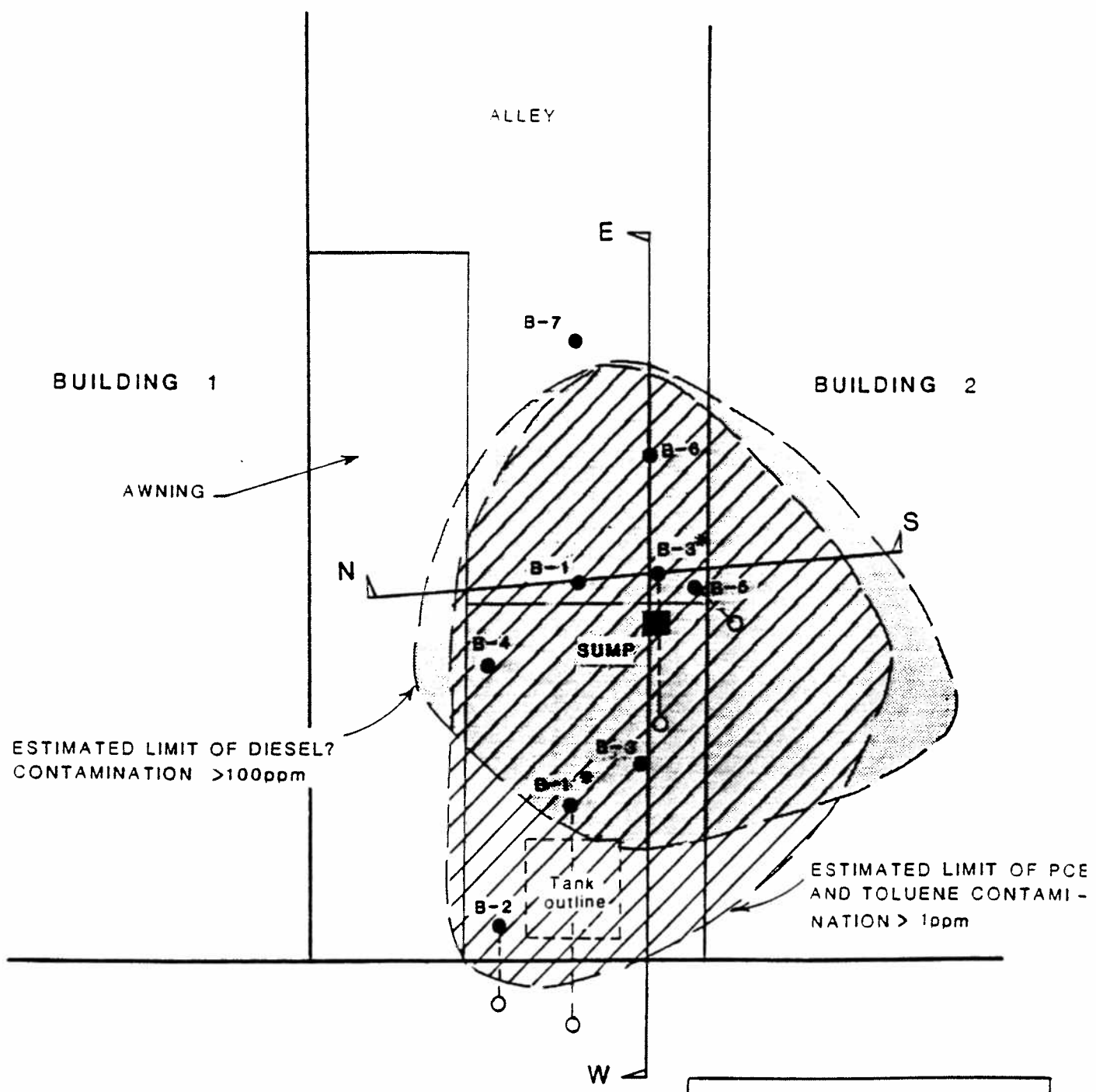
### PURPOSE

The purpose of the current investigation was to delineate the vertical and horizontal extent of contamination that occurred as a result of the discharge from the underground storage tank and/or the sump.

### SCOPE OF INVESTIGATION

Seven soil borings were drilled in the alley as shown on Figure 2. One boring (B-1) was drilled to 80 feet, one (B-2) to 40 feet, one (B-5) to 25 feet, and four borings (B-3, B-4, B-6, and B-7) were drilled to a depth of 20 feet. Undisturbed soil samples were

PROJECT No. 58 - 0605 DATE 10/9/90 PROJ. MGR. J.O. DFTR. M.G.



**LEGEND**

- B-2 ● Boring location and bottom hole location
- B-1 \* ● Boring from ALT investigation
- N S Section line

HAWKER PACIFIC  
SUN VALLEY, CALIFORNIA

SITE PLAN

Proj. No.



FIGURE 1



collected at 5-foot intervals in all borings. Based on field observations, selected soil samples were submitted to Curtis and Tompkins, Ltd. of Los Angeles, California, a state-certified analytical laboratory. The selected samples were analyzed for total extractable petroleum hydrocarbons (EPA Method 8015, Modified) and volatile organics (EPA Method 8240).

#### SUBSURFACE INVESTIGATIVE METHODS

Field work was conducted from August 28 through August 31, 1990. Seven soil borings, designated B-1 through B-7 were drilled in the alley (Figure 2). All work was performed in accordance with a site-specific Health and Safety Plan (Appendix A). Soil samples were obtained according to procedures outlined in Appendix B, Soil Sampling Protocol. The sampling equipment was thoroughly washed and rinsed prior to and during sampling. The soil samples were obtained by driving a split-spoon California sampler into the soil ahead of the augers. A soil sample from each sample interval was screened using an organic vapor analyzer (Foxboro OVA 108 GC) and Gastechtor 1238 to quantify organic vapor concentrations and combustible gas concentrations, respectively. Samples were collected in brass tubes, capped with Teflon® liners and tight-fitting plastic lids, and secured with vinyl tape. The samples were labeled and placed in an ice-filled cooler until delivery to the laboratory.





All findings and conclusions derived from measurements and/or analyses of soil, water, air and/or gas are based on the conditions which existed only at those particular sample locations and the times of sampling. The analytical results reflect the range of accuracy and detection levels, when specified, for the particular analytical equipment and/or specific analytical method(s) used.

Drilling was conducted by Layne Environmental Services, formerly Datum Exploration of Long Beach, California using B-53 and CME75 truck-mounted, hollow-stem auger drilling rigs and a SIMCO golf cart-mounted, hollow-stem drilling rig. Boring B-1 was completed to a depth of 80 feet. Boring B-2 was slant-drilled five degrees from vertical in a westward direction to a depth of 40 feet. Boring B-5 was slant-drilled five degrees from vertical in a southwest direction to a depth of 25 feet. Borings B-3, B-4, B-6, and B-7 were drilled to depths of 20 feet. Soil samples were collected from all borings at 5-foot intervals. All borings were backfilled with soil and patched with concrete or capped with the concrete plug that was cut for the boring.

## FINDINGS

### Field Observations

A thin layer of fill exists beneath the site. The fill soils consist of brown, medium to coarse-grained sand. Alluvial soil was



encountered in all borings. The alluvium consists generally of medium to very coarse-grained sand with gravel up to two inches in diameter and minor lenses of silty sand with gravel. Gravel lenses were encountered in Boring B-1 at depth which made drilling below 70 feet very difficult. Ground water was not encountered in any of the borings.

Conspicuous solvent odors were detected in drill cuttings from Borings B-1, B-3 and B-5. No visual evidence of contamination was noted in the drill cuttings. A Gastechtor 1238 was used to monitor combustible gases in the samples from Boring B-1. The values ranged from 450 parts per million ([ppm], relative to hexane) at 49 feet, to 240 parts per million (ppm) at 69 feet. The Foxboro 108 GC OVA was used to screen samples in all other borings. Organic vapor concentrations in Boring B-3 ranged from 75 ppm to 5 ppm (relative to methane), and in Boring B-5 from 44 ppm to 1 ppm (relative to methane). All boring logs are included in Appendix C.

OVA and Gastechtor readings were used as a relative indicator of the volatile organic compound content (including methane) of the soil in order to aid in the selection of samples for laboratory analyses. All equipment readings are included on the boring logs.



### Analytical Results

Analytical reports containing the results of testing of soil samples are included in Appendix D. Chain-of-Custody and QA/QC documentation are also included in Appendix D. Tables 2 and 3 present the analytical data obtained from testing 18 soil samples for extractable petroleum hydrocarbons by U.S. EPA Method 8015 (Modified) and purgeable organics by U.S. EPA Method 8240, respectively.

TABLE 2

#### RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES FOR EXTRACTABLE PETROLEUM HYDROCARBONS BY MODIFIED U.S. EPA METHOD 8015

BORING NO.	DEPTH (in feet)	CONCENTRATION (in ppm)		
		GASOLINE	KEROSENE	DIESEL
B-1	9	ND <.5	NR	NR
	29	ND <.5	NR	NR
	49	ND <.5	NR	NR
	69	ND <.5	NR	NR
	74	ND <10	ND <10	ND <10
B-2	5	ND <10	ND <10	ND <10
	20	ND <10	ND <10	ND <10
	30	ND <10	ND <10	ND <10
	40	ND <10	ND <10	ND <10
B-3	10	ND <10	ND <10	ND <10
	20	ND <10	ND <10	ND <10
B-4	5	ND <10	ND <10	110*
	20	ND <10	ND <10	ND <10
B-5	5	ND <50	ND <50	7,300*
	20	ND <10	ND <10	88*
B-6	20	ND <10	ND <10	ND <10
B-7	5	ND <10	ND <10	ND <10
	20	ND <10	ND <10	ND <10

ND<10 = Not detected, detection limit noted

NR = Not reported

\* Hydrocarbons in diesel range, did not match standards



TABLE 3  
RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES  
FOR PURGEABLE ORGANICS  
BY U.S. EPA METHOD 8240

SAMPLE NUMBER AND DEPTH	CONCENTRATION (in ppb)					
	PCE	TOLUENE	TCE	1,1,1-TCA	1,1-DCE	1,1-DCA
B-1 @ 9'	ND <5	TR #4	ND <5	ND <5	ND <5	ND <5
B-1 @ 29'	ND <5	8	ND <5	ND <5	ND <5	ND <5
B-1 @ 49'	ND <5	5	ND <5	ND <5	ND <5	ND <5
B-1 @ 69'	ND <5	8	ND <5	ND <5	ND <5	ND <5
B-1 @ 74'	ND <5	TR #4	ND <5	ND <5	ND <5	ND <5
B-2 @ 5'	450	70	ND <5	ND <5	ND <5	ND <5
B-2 @ 20'	42	18	ND <5	ND <5	ND <5	ND <5
B-2 @ 30'	7	10	ND <5	ND <5	ND <5	ND <5
B-2 @ 40'	ND <5	TR #4	ND <5	ND <5	ND <5	ND <5
B-3 @ 10'	21	18	ND <5	ND <5	ND <5	ND <5
B-3 @ 20'	20	25	ND <5	ND <5	ND <5	ND <5
B-4 @ 5'	370	40	ND <5	ND <5	ND <5	ND <5
B-4 @ 20'	26	14	ND <5	ND <5	ND <5	ND <5
B-5 @ 5'	130,000	150	260	290	42	28
B-5 @ 25'	16	TR #3	ND <5	ND <5	ND <5	ND <5
B-6 @ 20'	ND <5	ND <5	ND <5	ND <5	ND <5	ND <5
B-7 @ 5'	ND <5	13	ND <5	ND <5	ND <5	ND <5
B-7 20'	ND <5	ND <5	ND <5	ND <5	ND <5	ND <5

PCE = Tetrachloroethene  
 TCE = Trichloroethene  
 1,1,1-TCA = 1,1,1-Trichloroethane  
 1,1-DCE = 1,1-Dichloroethene  
 1,1-DCA = 1,1-Dichloroethane  
 ND <5 = Not detected, detection limit noted  
 TR = Trace

Elevated concentrations of tetrachloroethene (PCE) (130,000 parts per billion [ppb]) and diesel-like petroleum hydrocarbons (7,300 ppm) were detected in samples from the sump area boring (B-5) at 5 feet. The concentration of these constituents (PCE and diesel) decreased in B-5 at 25 feet to 16 ppb and 88 ppm, respectively. Slightly elevated levels of PCE and toluene were also found in soil samples from the adjacent borings (B-1, B-2, B-3, and B-4).



The concentrations of petroleum hydrocarbons in soil reported in the diesel category were not an exact match to the diesel standard. Mr. Tony Hart, laboratory manager for Curtis and Tompkins Laboratory, indicated that aged diesel can give similar responses. Other solvents, such as Stoddard solvent, can also show up in the diesel range in analyses for extractable petroleum hydrocarbons.

#### CONCLUSIONS

Based on the high concentration of PCE, toluene and the diesel range petroleum hydrocarbons beneath the small sump area, we conclude that a release of hazardous constituents has occurred at that location. A leak in the underground storage tank may be responsible for some of the contamination; however, the sump is the most probable origination point for the release. PCE, toluene and petroleum hydrocarbon contamination extends vertically down to approximately 25 feet at the sump location.

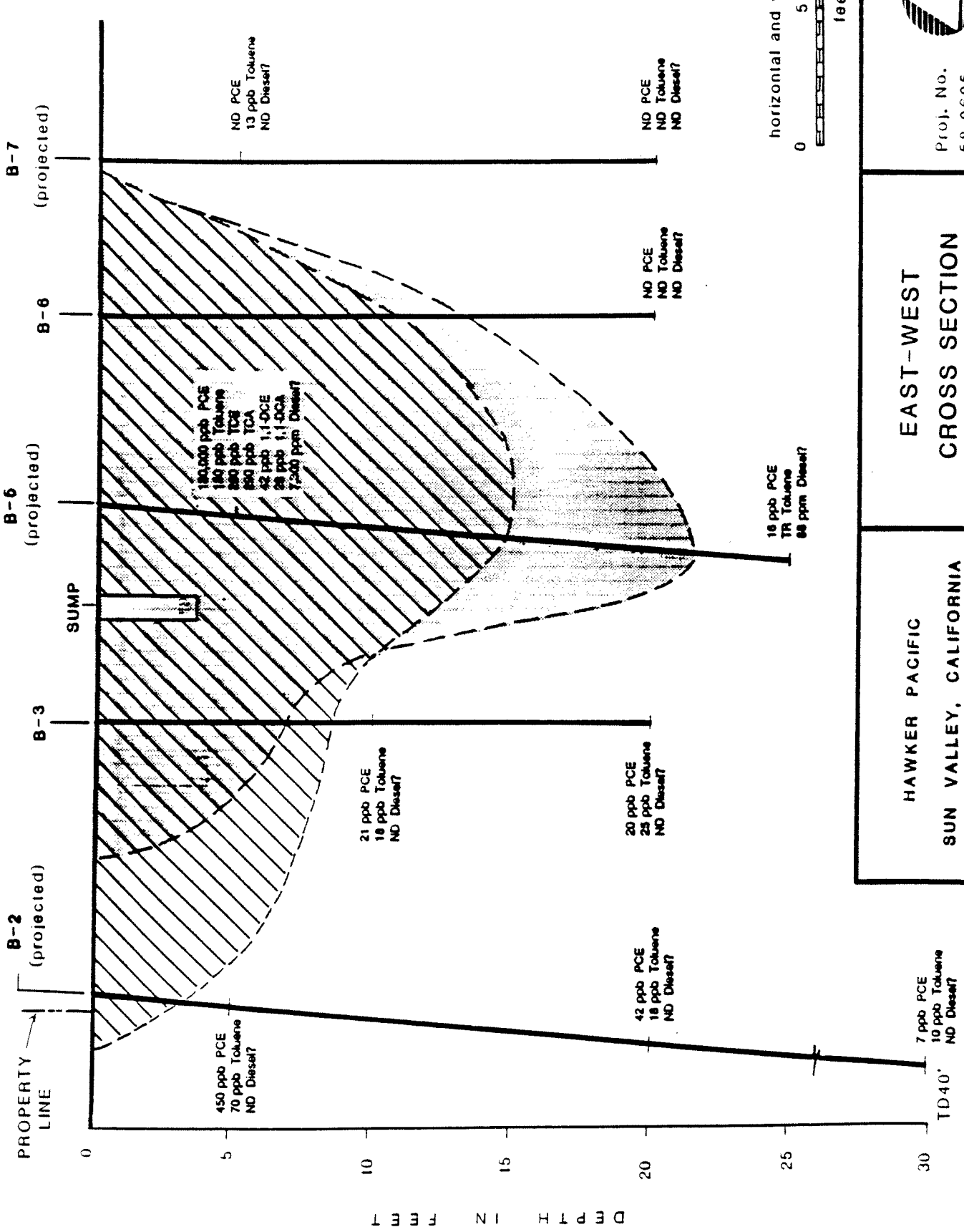
Figure 2 shows approximate limits of the horizontal extent of PCE, toluene and diesel-like contamination. The analytical results indicate that the limits of the combined toluene and PCE contamination extend further west than the diesel-like contamination. This may reflect an additional discharge point, but more likely indicates different migration characteristics of the constituents or a difference in soil type. The Los Angeles County Department of Public Works has set a cleanup level of 100 ppm for



diesel compounds encountered in soils. This is the maximum level of diesel contamination in soil that may be allowed to remain in place without undergoing removal or remediation. Contamination near Boring B-5 is present down to approximately 15 to 20 feet (Figures 3 and 4). Concentrations of PCE, toluene and diesel-like constituents decrease rapidly with lateral distance from B-5. It is likely that the contamination extends beneath Buildings 1 and 2 near B-4 and B-5, respectively. The contours depicted on Figure 2 were approximated by the interpolation of known lateral reductions in concentrations of the constituents tested. Contamination is present to the east of the sump area, but does not extend to B-6.

PCE, among others, is a solvent commonly used in the manufacturing industry. Toluene can be a component of certain solvents or fuel. If the toluene present at the site was a component of fuel, we would expect to detect a substantial concentration of other fuel constituents, such as benzene, ethylbenzene and xylenes, in the purgeable organics analyses. However, none of these latter fuel additives were detected in the samples tested. Therefore, the observed levels of toluene suggest that they may be attributable to solvent and may either be a result of weathering of the solvent or the boosting of solvent to improve a particular property. The petroleum hydrocarbons detected in the diesel range could also be either weathered diesel or a C12 to C30 solvent.

W E

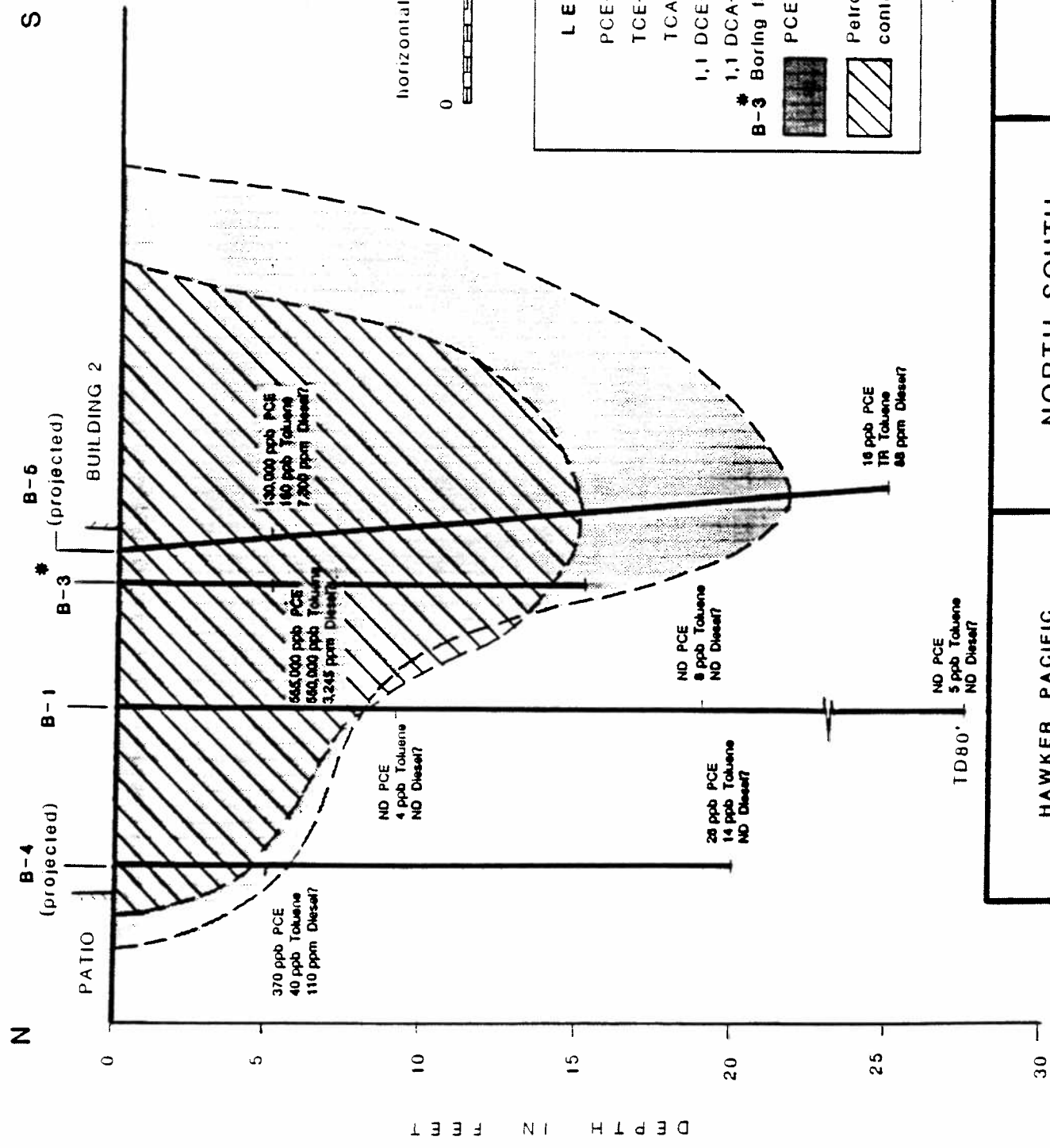


EAST-WEST  
CROSS SECTION

HAWKER PACIFIC  
SUN VALLEY, CALIFORNIA



Proj. No.  
58-0605



**NORTH-SOUTH CROSS SECTION**

**HAWKER PACIFIC**

**SUN VALLEY, CALIFORNIA**





### RECOMMENDATIONS

- Law Environmental recommends that steps be taken to remove the underground storage tank at the west end of the alley between Buildings 1 and 2. The data from analyses of the samples collected in this investigation and the previous assessment should be sufficient information for the lead agency to complete a tank closure report.
- It is recommended that the PCE and toluene-contaminated soil either be removed or remediated in-place. If soil is to be excavated, we recommend that a structural engineer be consulted to determine the stability of adjacent structures during and after removal of the material. Under the August 8, 1988 Land Disposal Restrictions, land disposal of this soil is prohibited. The specific test to determine the Toxicity Characteristic Leaching Program (TCLP) concentration of PCE for site soils has not been performed. The data we do have, which indicates up to 555 ppm of PCE, suggests that the TCLP limit of 0.7 mg/l is probably exceeded. Toluene is not a TCLP regulated constituent, however, it is on the proposed list.

### Remediation Alternatives

Excavation and incineration appears, at this point, to be the most costly, although most rapid, remedial measure. We estimate that a



minimum of 50 cubic yards of soil and an approximate maximum of 110 cubic yards may require remediation.

Soil vapor extraction is the preferred method of remediation at the site. Law Environmental is confident that soil vapor extraction will prove to be an effective method of significantly reducing PCE and toluene concentrations within site soils. We base this opinion on the nature of the underlying alluvial soils which are predominantly composed of sand and gravel.

Soil vapor extraction is generally considered a fairly long-term remedial measure, commonly requiring one to two years or more for completion. We estimate that 90 percent removal of recoverable PCE and toluene may be achieved within the first six months of operation of a full-scale system. Operation and maintenance costs should be minimal following the initial six months of operation, exclusive of many restrictions and monitoring requirements which may be imposed by regulatory agencies.

**APPENDIX A**

**HEALTH AND SAFETY PLAN**

JOB NAME Hawker Pacific JOB NO. 58-0605HEALTH AND SAFETY PLAN

Health and Safety Officer Elaine Silvestro Date \_\_\_\_\_  
Principal Engineer/Scientist Glenn A. Brown Date \_\_\_\_\_  
Field Safety Coordinator Juli Osborne Date \_\_\_\_\_

DATE PREPARED08/24/90FIELD DATES8/27-31/90

Site location: 11310 Sherman Way  
Sun Valley, California

MEDICAL SURVEILLANCE

All Law Environmental field personnel participate in the corporate medical program.

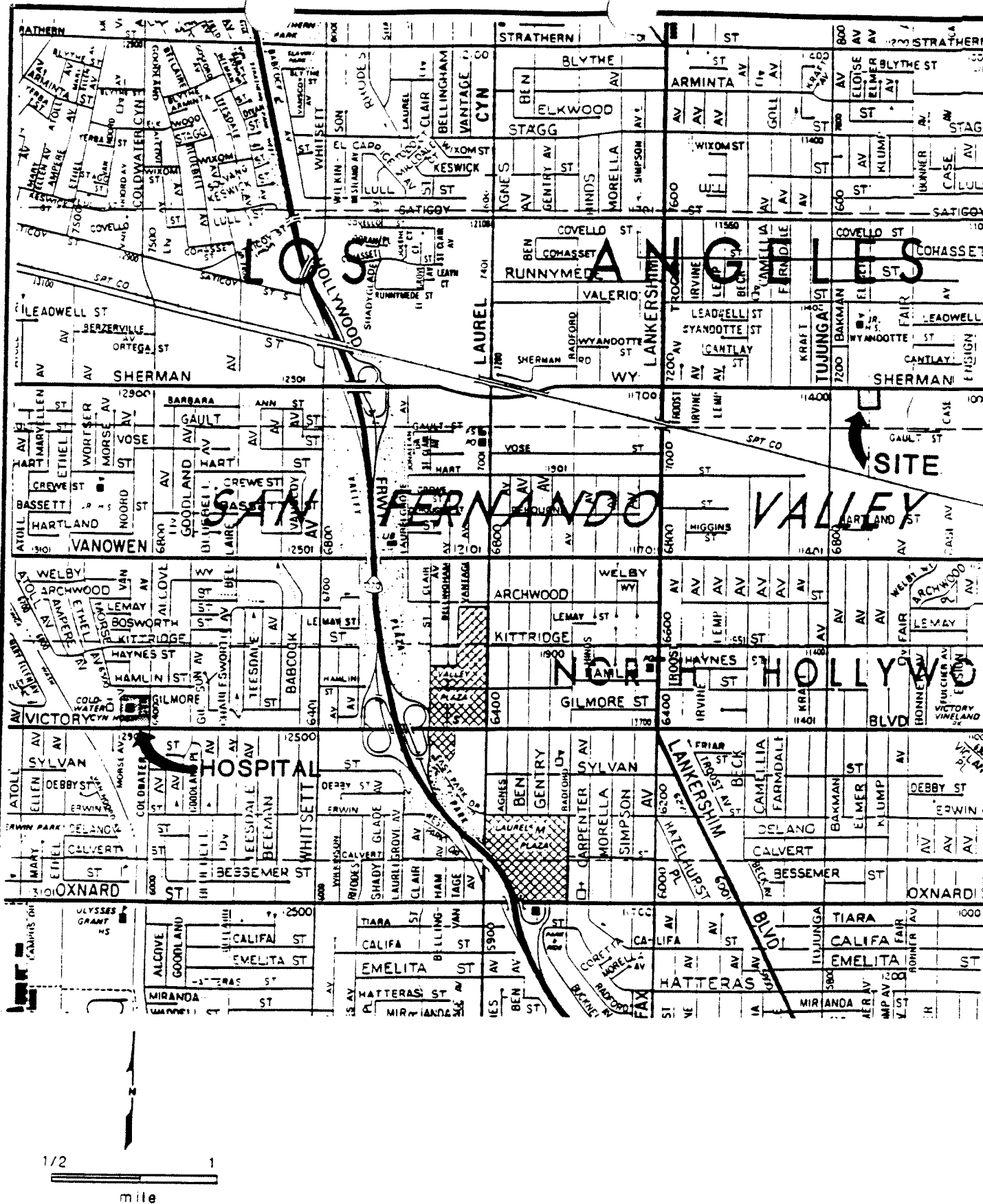
EMERGENCY TELEPHONE NUMBER

Emergency phone numbers, and direction to phone or medical facility are to be determined by the Field Safety Coordinator prior to beginning work.

HOSPITAL: (818) 984-2000 Coldwater Canyon Hospital  
FIRE: 911  
POLICE: 911  
SAFETY: Jack Peng (404) 447-0544  
Elaine Silvestro (818) 848-0214

HOSPITAL LOCATION

Coldwater Canyon Hospital is located at 6421 Coldwater Canyon Avenue, North Hollywood, California.



HAWKER PACIFIC  
SAN FERNANDO VALLEY, CA.

HOSPITAL  
LOCATION MAP

Proj. No.  
58-0612



FIGURE

### DIRECTIONS TO HOSPITAL

Travel west (left) on Sherman Way for approximately 2 miles. Turn south (left) on Coldwater Canyon Avenue and drive approximately one mile. Turn right into the hospital parking lot prior to Victory Boulevard.

### EMERGENCY PROCEDURES

#### Exposures

Skin - remove contaminated clothing immediately, wash with soap and water.

Inhalation - remove to fresh air.

Eye Contact - flush with eye wash or water; get medical help if indicated. Contaminants may be absorbed through eyes.

Ingestion - get medical help if indicated.

Injuries - Administer first aid if appropriate. Medical emergencies take precedence over decontamination. Have change ready for telephone.

Fire/Explosion - Use hand extinguishers if appropriate and safety permits. Contact Project Manager and client officials. Evacuate if necessary to upwind location.

Accidental Spill/Release - (1) Pick up, isolate, or contain spill; (2) Evacuate area if necessary; (3) Contact project manager, Jack Peng, or Branch Manager.

### SITE INFORMATION

#### HAZARDOUS/TOXIC MATERIALS

Chemical data sheets for the compounds listed below may be found at the end of the text.

Tetrachloroethene  
Toluene

#### HAZARDOUS ASSESSMENT

Tetrachloroethene and toluene have been released to the soil from a sump located in the alley between Buildings 1 and 2.

CLEAN AREA/DECONTAMINATION

To be determined at the site by the Field Safety Coordinator.

WORK PROCEDURESPLANNED FIELD ACTIVITIES

Drilling of soil borings and collection of soil samples. Obtain samples at five-foot intervals using a California split-spoon sampler.

SITE AND/OR PERSONNEL MONITORING

An organic vapor detector will be used to monitor borings and excavated soils. Areas of airborne dust and odor should be avoided. All contact with soil should be avoided.

CLOTHING AND PROTECTIVE GEAR

Subcontractors and others not employed by Law Environmental will not be furnished protective equipment unless prior arrangements have been made.

Required at the Work Site

Level C Protection  
Tyvek suits, half or full-face cartridge respirator with appropriate organic vapor cartridges, rubber boots and gloves, hard-hats, protective eyewear.

The Field Safety Coordinator will determine the appropriate level of personal protective equipment required to be worn based on conditions encountered in the field.

DECONTAMINATION PROCEDURES

Reusable safety gear will be washed prior to reuse or removing from site. Sampling tools, etc., will be decontaminated as prescribed in the Work Plan, or as directed by the Field Safety Coordinator.

**DISPOSAL PROCEDURES**

Contaminated items should be: (1) disposed of as directed by client officials; or (2) bagged or containerized and left on-site if possible.

**WORK PRECAUTIONS**

1. Prior to going on-site, the Field Safety Coordinator will review available data and information pertaining to site conditions, potential contaminants, and work to be accomplished.
2. Prior to beginning any work on the site, the FSC shall brief all field personnel on the contents of this plan.
3. No eating, drinking, smoking, chewing gum, or tobacco is permitted at the work site.
4. Wear prescribed safety equipment as directed in this Plan.
5. Remove and discard any clothing that becomes contaminated.
6. Do not go anywhere on-site other than where directed by the FSC.
7. Wash exposed skin with soap and water before leaving site.
8. Potable water shall be provided in sufficient quantity to provide emergency washing.
9. Use safe and legal procedures for sample storage and shipment.



**PERSONNEL AUTHORIZED TO ENTER SITE**

By initialing and dating this form, the listed individual acknowledges that he has read, understands, and will comply with the requirements of this Health and Safety Plan.

Name	Date	Initials
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Other personnel who may handle hazardous materials

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\*\*\*\*\*

FIELD SAFETY COORDINATOR'S SUMMARY

To be completed after each phase of work.

- a. There was no violation of this Health and Safety Plan and no obvious contamination of any personnel.
- b. The following incidents, violations, exposures, or contamination occurred. (Tell who, when, contaminants, circumstances, first aid or medical assistance needed.)

Field Safety Coordinator \_\_\_\_\_ Date \_\_\_\_\_

\* \* \* RETURN TO HEALTH AND SAFETY OFFICER \* \* \*

ALL accidents or incidents resulting in POTENTIAL exposure to hazardous materials must be reported as soon as possible to:

1. Health/Safety Officer, or
2. Project Manager, or
3. Chief Engineer, or
4. Branch Manager

Complete for all jobs:

Job name \_\_\_\_\_ Job no. \_\_\_\_\_

Dates in field  
\_\_\_\_\_

Next phase of work scheduled  
\_\_\_\_\_

\*\*\*\*\*

!!! RETURN COPY OF THIS PAGE TO HEALTH AND SAFETY OFFICER !!!

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**APPENDIX B**

**SOIL SAMPLING PROTOCOL**

### SOIL SAMPLING PROTOCOL

The following procedures are followed when sampling soil with the hollow-stem auger drilling technique.

1. Continuous flight, hollow-stem augers are used.
2. All augers, samplers and downhole equipment are steam cleaned prior to use and between borings. This minimizes the possibility of cross-contamination occurring.
3. A registered geologist or other appropriately trained personnel observes the drilling, visually logs the soils, and obtains soil samples at appropriate intervals (usually 5 feet) as determined by field conditions.
4. The Unified Soils Classification System (USCS) is utilized to classify the soils. Rocks are classified according to the Colorado School of Mines "Classification of Rocks."
5. The soil samples are obtained using a modified California split-spoon sampler, which accommodates two to six sample tubes. Various tubes are utilized to accommodate the different analyses required:

Brass Tubes: 2-1/2 by 3 or 6 inches - for all organics and general analyses, excluding copper and zinc.

Stainless Steel Tubes: 2-1/2 by 3 or 6 inches - for all organics and metals analyses excluding chrome and nickel.

6. The tubes are scrubbed with a brush and TSP or equivalent cleaning agent, then rinsed with tap water. If required, the tubes are steam cleaned. Tubes are given a final rinse with distilled water and delivered to the drilling site in closed buckets or equivalent to preclude recontamination.
7. After the sample tubes are removed from the sampler, the latter is completely disassembled and scrubbed in TSP or equivalent and tap water. The sampler is rinsed with tap water, and distilled water (if required) and reassembled with the required number of clean tubes.
8. Unclean tubes are washed with TSP or equivalent solution, rinsed with tap water, etc. as described in 6 above.
9. In loose soils, a sand catcher is used to prevent soil from falling out of the sampler.
10. The sampler is driven 12 or 18 inches at each sampling. Generally, the lowest tube is retained for analysis. The

other tube or tubes are retained for split sampling or as a back-up.

11. The sample is logged in. After testing for the presence of combustible gases or volatile organic compounds, the sample is capped with Teflon liners and tight-fitting plastic caps to minimize leaching and cross-contamination. Black vinyl electrical tape is used to tightly secure the caps to the sample tube. The samples are labeled and preserved in clean ice chests containing Blue Ice or equivalent, to keep the samples at or about 4 degrees Celsius.
12. The samples are kept in the ice chest until delivered to a State and EPA certified testing laboratory, the same day if physically possible. The undelivered samples are stored or archived in secured Law Environmental sample storage at or about 4 degrees Celsius. A freezer is also available at Law Environmental if freezing samples is required or recommended.
13. All samples are accompanied by a chain-of-custody form, documenting the time, date, and person-in-charge since retrieval of the sample from the sampler.
14. In case of visual and/or olfactory evidence of contamination, soil cuttings are impounded in drums carrying

cautionary labels. The drums are secured from random contact. Custody of the drums and their content will remain with the client at all times.

15. If chemical analysis of the soil indicates the presence of elevated levels of pollutants, then the Client will be informed of the test results and advised as to the lawful means of disposal or detoxification. Upon the written request and authorization by the Client, Law Environmental will organize the disposal or detoxification of the impounded soil in accordance with all applicable Federal, State, County and local regulations.
16. The soil sample tube label includes:
  - Job Number
  - Boring Number and Depth
  - Sampling Date
  - Sampler's Initials
  - Test to be Performed (if known at the time of sampling).
17. An indelible marking pen or a ball-point pen is used to mark the sample tubes.
18. A detailed log is kept of all field activities.
















SUBSURFACE COMBUSTIBLE GAS OR  
VOLATILE ORGANIC COMPOUND SAMPLING PROTOCOL

1. The contents of one of the sample tubes is placed into a resealable plastic bag. The soil in the bag is broken up and left in the sun for approximately 10 minutes. A hole is then made in the plastic bag.
2. The end of the analyzer probe, such as GasTechtor 1238, Foxboro 108 GC, or equivalent, is inserted into the hole, and the Parts Per Million (PPM) or Lower Explosive Limit (LEL) scale read for indications of combustible gas or volatile organic compounds. The reading is taken only after the instrument needle ceases drifting and stabilizes. Readings are recorded on the boring logs.



APPENDIX C

BORING LOGS

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS  (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS  (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	 GW	Well graded gravels, gravel-sand mixtures, little or no fines.
			 GP	Poorly graded gravels or gravel-sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amt. of fines)	 GM	Silty gravels, gravel-sand-silt mixtures.
			 GC	Clayey gravels, gravel-sand-clay mixtures.
	SANDS  (More than 50% of coarse fraction is SMALLER than the No. 4 sieve size)	CLEAN SANDS (Little or no fines)	 SW	Well graded sands, gravelly sands, little or no fines.
			 SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amt. of fines)	 SM	Silty sands, sand-silt mixtures.
			 SC	Clayey sands, sand-clay mixtures.
FINE GRAINED SOILS  (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)	 ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.	
		 CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.	
		 OL	Organic silts and organic silty clays of low plasticity.	
	SILTS AND CLAYS (Liquid limit GREATER than 50)	 MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.	
		 CH	Inorganic clays of high plasticity, fat clays.	
		 OH	Organic clays of medium to high plasticity, organic silts.	
		HIGHLY ORGANIC SOILS		 Pt

**BOUNDARY CLASSIFICATIONS:** Soils possessing characteristics of two groups are designated by combinations of group symbols.

### PARTICLE SIZE LIMITS

SILT OR CLAY	SAND			GRAVEL		COBBLES	BOULDERS
	FINE	MEDIUM	COARSE	FINE	COARSE		
	NO. 200	NO. 40	NO. 10	NO. 4	3/4 in.	3 in.	(12 in.)
	U. S. STANDARD SIEVE SIZE						

Reference:  
The Unified Soil Classification System, Corps of Engineers, U. S. Army Technical Memorandum No. 3-357, Vol. 1, March, 1953. (Revised April, 1960)

GRAPHIC LOG  
LEGEND

PAGE 1 of 1



PROJECT No. \_\_\_\_\_ DATE \_\_\_\_\_ PROJ. MOR. \_\_\_\_\_ DTFR \_\_\_\_\_

					GRAPHIC LOG LEGEND: SEE PAGE C-1	
	TIME	OVA READING Dps methane	Number Interval	DEPTH feet	USCS	GRAPHIC LOG
				0		Four inches of concrete
				1	SW	Sand - medium brown, medium to coarse-grained, poorly sorted, with pebbles to 1/2 inch in diam loose, slightly moist, slight solvent odor
				2		
				3		
	09:38	250	X	4		- color change to medium-light brown, slight solvent odor
				5		
				6		
				7		
				8		
	09:44	300	X	9		- medium brown, very poorly sorted, pebbles to 1 inch in diameter, solvent odor
				10		
				11		
				12		
				13		
				14		
	09:52	300	X	15	SW	Gravel - large gravel lense, approximately 6 inches thick
				16		Sand - medium brown, medium to coarse grained, poorly sorted, loose, slightly moist, slight solvent odor
				17		
				18		
	10:02	275	X	19		- becoming more coarse-grained, pebbles to 1/4 inch in diameter, decreasing moisture, dry
				20		
				21		
				22		
				23		
	10:02	300	X	24		- medium to coarse-grained, slight solvent odor
				25		

OWNER: Hawker Pacific  
 LOCATION: 11310 Sherman Way  
 DRILLED BY: Lane - Datum  
 METHOD: Hollow-stem auger

BOREHOLE DEPTH: 70 feet  
 BOREHOLE DIAMETER: 8 inches  
 DATE DRILLED: 08/28/90  
 LOGGED BY: JGO

HAWKER PACIFIC  
 11310 SHERMAN WAY

BORING LOG

PAGE 1 of 3

PROJECT NO. 58-0505 DATE 08/26/1990 PROJ. MGR. DFTR.

PROJECT NO.	DATE	TIME	OYA READING psi methane	SAMPLE Number	Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION	
58-0505	09/26/1990	10:13	400	X	29	29	SW		- coarse-grained. slight solvent odor	
58-0505	09/26/1990	10:21	400	X	34	34	SW		- medium to coarse-grained. pebbles to 1/2 inch in diameter. slight solvent odor	
58-0505	09/26/1990	10:31	400	X	39	39	SW		- pebbles to 1/4 inch in diameter. slight solvent odor	
58-0505	09/26/1990	10:41	350	X	44	44	SW		- becoming medium-grained with some coarse sand. moderately sorted. slight solvent odor	
58-0505	09/26/1990	10:47	450	X	49	49	SW		- pebbles to 1/2 inch in diameter. slight solvent odor	
OWNER: Hawker Pacific LOCATION: 11310 Sherman Way DRILLED BY: Lane - Datum METHOD: Hollow-stem auger					BOREHOLE DEPTH: 70 feet BOREHOLE DIAMETER: 8 inches DATE DRILLED: 08/28/90 LOGGED BY: JGO					
HAWKER PACIFIC 11310 SHERMAN WAY PROJECT NO. 58-0505					BORING LOG No. B-1					
					PAGE 2 of 3					

GRAPHIC LOG LEGEND: SEE PAGE C-1						MATERIALS DESCRIPTION
TIME	OVA READING ppm methane	Number	SAMPLE Interval	DEPTH feet	USCS	
				50	SW	
				51		
				52		
				53		
10:35			⊗	54		- slight solvent odor
				55		
				56		
				57		
				58		
	18		⊗	59		- medium to coarse grained, pebbles to 1/4 inch in diameter, slight solvent odor
				60		
				61		
				62		
				63		
11:41	20		⊗	64		- color change to greyish green to medium brown fine to very coarse-grained, slightly firm, slightly moist, very slight odor
				65		
				66		
				67		
				68		
12:20	24		⊗	69		- color grey-brown, medium to very coarse-grained loose, dry, slight odor
				70		
				71		
				72		
				73		
				74		
				75		

NOTES: Refusal at 70 feet. End of boring at 70 feet. No ground water encountered. Backfilled boring with soil to 3 feet then hole-plug.

OWNER: Hawker Pacific  
 LOCATION: 11310 Sherman Way  
 DRILLED BY: Lane - Datum  
 METHOD: Hollow-stem auger

BOREHOLE DEPTH: 70 feet  
 BOREHOLE DIAMETER: 8 inches  
 DATE DRILLED: 08/28/90  
 LOGGED BY: JGG

HAWKER PACIFIC  
 11310 SHERMAN WAY

BORING LOG  
 No R-4

PROJECT NO. 58-0605 DATE 08/28/1990 PROJ. MOR. DFTR.

PROJECT NO.	DATE	PROJ. MGR.	DFTR.	TIME	OYA READING ppa methane	Number	Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
58-0605	09/26/1990			12:01				70	SM		- DRILL TO 70 FEET, THEN TAKE SAMPLES Sand - grey-brown, medium to very coarse-grained, poorly sorted, loose, dry, slight odor
								71			
								72			
								73			
				13:01	5/5			74	SM	Silty Sand - grey to brown, coarse to fine-grained, with granitic pebbles up to 3 inches in diameter, poorly sorted, angular to subangular, loose, damp, no odor detected	
								75			
								76			
								77			- penetration rate very slow
								78			
				17:30	2/2			79	GM	Silty Sandy Gravel - brown, very coarse to fine-grained, with pebbles to 1 inch in diameter, poorly sorted, moderately firm, damp	
								80		NOTES: End boring at 80 feet. No ground water encountered. Backfilled boring with soil and patched with concrete.	
								81			
								82			
								83			
								84			
								85			
								86			
				87							

OWNER: Hawker Pacific LOCATION: 11310 Sherman Way DRILLED BY: Datum METHOD: Hollow-stem auger	BOREHOLE DEPTH: 80 feet BOREHOLE DIAMETER: 8 inches DATE DRILLED: 08/31/90 LOGGED BY: ASH
--	--

HAWKER PACIFIC 11310 SHERMAN WAY PROJECT NO. 58-0605	BORING LOG No. B-1A	PAGE 1 of 1
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					GRAPHIC LOG LEGEND: SEE PAGE C-1	
	TIME	OVA READING ppm methane	Number Interval	DEPTH feet	USCS	GRAPHIC LOG
				0		Four inches of concrete
				1		Fill - dark brown, medium to coarse-grained, poorly sorted, pebbles to 1 inch in diameter.
				2		
				3		
				4		
	10:55	10	X	5	SW	Sand - medium brown, medium to very coarse- grained, pebbles to 1/4 inch in diameter, very poorly sorted, loose, dry, no odor
				6		
				7		
				8		
				9		
	11:15	5	X	10		- medium brown-gray, pebbles to 1 inch in diameter, no odor
				11		
				12		
				13		
				14		
	11:40	5	X	15		- same as above, no odor
				16		
				17		
				18		
				19		
	12:38	2	X	20		- medium brown, fine to very coarse-grained, no odor
				21		
				22		
				23		
				24		
				25		

PROJECT No. 58-0605 DATE 09/26/1990 PROJ. MGR. DTR.

OWNER: Hawker Pacific  
 LOCATION: 11310 Sherman Way  
 DRILLED BY: Datum  
 METHOD: Hollow-stem auger

BOREHOLE DEPTH: 40 feet  
 BOREHOLE DIAMETER: 6 inches  
 DATE DRILLED: 08/29/90  
 LOGGED BY: JGO

HAWKER PACIFIC  
 11310 SHERMAN WAY  
 BOULDER CO. 80501

BORING LOG  
 No. B-2

PAGE 1 of 2

PROJECT No.	DATE	PROJ. MGR.	DTR.	TIME	OVA READING ppm methane	Number	Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
58-0605	09/26/1990			12:58	1	X	Interval	25	SW		- pebbles to 1/4 inch in diameter, no odor
								26			
								27			
								28			
								29			
								30			
								31			
								32			
								33			
								34			
								35			
								36			
								37			
								38			
								39			
								40			
								41			
								42			
								43			
								44			
45											
46											
47											
48											
49											
50											
NOTES: End of boring at 40 feet. No ground water encountered. Backfilled boring with sand and patched with concrete.											
OWNER: Hawker Pacific LOCATION: 11310 Sherman Way DRILLED BY: Datum METHOD: Hollow-stem auger											
BOREHOLE DEPTH: 40 feet BOREHOLE DIAMETER: 6 inches DATE DRILLED: 08/29/90 LOGGED BY: JGO											

HAWKER PACIFIC  
11310 SHERMAN WAY

BORING LOG  
No R-2

PAGE 2 of 2



					GRAPHIC LOG LEGEND: SEE PAGE C-1	
	TIME	OVA READING ppm methane	Number Interval	DEPTH feet	LOGS	GRAPHIC LOG
						MATERIALS DESCRIPTION
				0		One inch of concrete
				1		Fill - dark brown, heavy odor
				2		
				3		
				4		
	10:55	10	×	5	SW	Sand - grey-brown, medium to very coarse-grained, with pebbles to 1/2 inch in diameter, poorly sorted, loose, dry, heavy chlorinated solvent odor
				6		
				7		
				8		
	11:15	5	×	10		- medium brown, pebbles to 1 inch in diameter, slightly moist, heavy chlorinated solvent odor
				11		
				12		
				13		
	11:40	5	×	15		- same as above
				16		
				17		
				18		
	12:38	2	×	19		- medium-light brown, dry, slight chlorinated odor
				20		
				21		NOTES: End of boring at 20 feet. No ground water encountered, no caving. Backfilled boring with soil.
				22		
				23		
				24		
				25		

PROJECT No. 58-0605 DATE 09/27/1990 PROJ. MGR. DFT.

OWNER: Hawker Pacific  
LOCATION: 11310 Sherman Way  
DRILLED BY: Datum  
METHOD: Hollow-stem auger

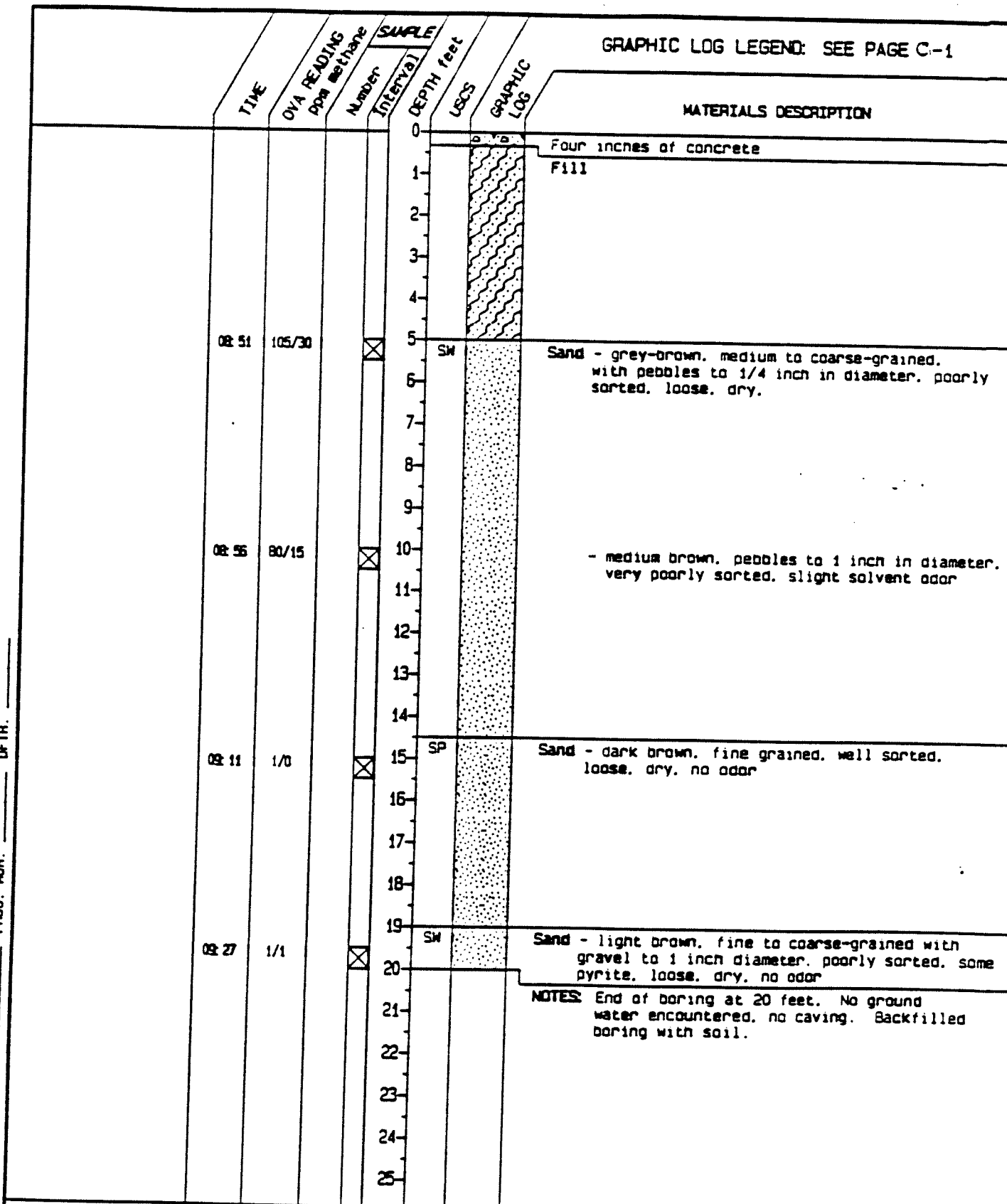
BOREHOLE DEPTH: 20 feet  
BOREHOLE DIAMETER: 6 inches  
DATE DRILLED: 08/29/90  
LOGGED BY: JGO

HAWKER PACIFIC  
11310 SHERMAN WAY

BORING LOG

No. B-2

PAGE 1 of 1



PROJECT No. 58-0605  
 DATE 08/26/1990  
 PROJ. MGR. DFTR.  
 OWNER: Hawker Pacific  
 LOCATION: 11310 Sherman Way  
 DRILLED BY: Datum  
 METHOD: Hollow-stem auger

BOREHOLE DEPTH: 20 feet  
 BOREHOLE DIAMETER: 8 inches  
 DATE DRILLED: 08/31/90  
 LOGGED BY: JGO

HAWKER PACIFIC  
 11310 SHERMAN WAY

BORING LOG

No. R-4

PAGE 1 of 1

					GRAPHIC LOG LEGEND: SEE PAGE C-1	
TIME	OVA READING ppm Methane	Number	Interval	DEPTH feet	LOGS	MATERIALS DESCRIPTION
08:57				0		Five inches of concrete
				1		Fill
				2		
				3		
				4		
10:02	44/70			5	SW	Sand - light brown, fine to coarse-grained, poorly sorted, angular, occasional granite cobble up to 2 inches in diameter, some pyrite, biotite muscovite, loose, damp, odor detected
				6		
				7		
				8		
				9		
10:08	24/18			10		- brown, occasional granite cobbles to 1 inch in diameter, no odor detected
				11		
				12		
				13		
				14		
10:13	1/2			15		
				16	SM	Silty Sand - brownish gray, fine to coarse-grained, moderately firm, damp
				17		
				18		
				19		
10:21	8/8			20	SP	Sand - tan, medium to fine-grained with occasional pebbles to 1/2 inch diameter, moderately well sorted, angular to subrounded, muscovite, biotite, loose, damp, no odor detected
				21		
				22		
				23		
				24	SW	Sand - light gray with rust red clay layer, fine to coarse-grained, scattered granite pebbles up to 1 inch in diameter, poorly sorted, angular, biotite, muscovite, clay is plastic, very wet, sand is loose, damp, no odors detected
				25		

OWNER: Hawker Pacific  
 LOCATION: 11310 Sherman Way  
 DRILLED BY: Lane Environmental  
 METHOD: Hollow-stem auger

BOREHOLE DEPTH: 26 feet  
 BOREHOLE DIAMETER: 6 inches  
 DATE DRILLED: 08/31/90  
 LOGGED BY: ASH

HAWKER PACIFIC  
 11310 SHERMAN WAY  
 PROJECT NO. 58-0605

BORING LOG  
 No. 8-5

PAGE 1 of 2

PROJECT NO. 58-0605 DATE 09/27/1990 PROJ. MGR. DFTR.

TIME	OYA READING ppm methane	Number Interval	SAMPLE DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
10:38	174	X	25	SW		
			26			<b>NOTES:</b> End of boring at 26 feet. No ground water encountered. no caving. Backfilled boring with soil. patched with concrete.
			27			
			28			
			29			
			30			
			31			
			32			
			33			
			34			
			35			
			36			
			37			
			38			
			39			
			40			
			41			
			42			
			43			
			44			
			45			
			46			
			47			
			48			
			49			
			50			

OWNER: Hawker Pacific  
 LOCATION: 11310 Sherman Way  
 DRILLED BY: Lane Environmental  
 METHOD: Hollow-stem auger

BOREHOLE DEPTH: 26 feet  
 BOREHOLE DIAMETER: 6 inches  
 DATE DRILLED: 08/31/90  
 LOGGED BY: ASH

HAWKER PACIFIC  
 11310 SHERMAN WAY

BORING LOG  
 No R-5

PAGE 2 of 2

PROJECT No. 58-0605      DATE 09/27/1990      PROJ. MGR.      DFTR.

PROJECT No. 58-0802	OWNER: Hawker Pacific		BOREHOLE DEPTH: 20 feet
	LOCATION: 11310 Sherman Way		BOREHOLE DIAMETER: 6 inches
	DRILLED BY: Lane - Western		DATE DRILLED: 08/31/90
	METHOD: Hollow-stem auger		LOGGED BY: ASH
	HAWKER PACIFIC 11310 SHERMAN WAY	BORING LOG	PAGE 1 of 1

						GRAPHIC LOG LEGEND: SEE PAGE C -1		
	TIME	OVA READING ppm methane	Number	SAMPLE Interval	DEPTH feet	USCS	GRAPHIC LOG	MATERIALS DESCRIPTION
					0			One inch of concrete
					1			Fill
					2			
					3			
					4			
	09:03	1/0		⊗	5	SW		Sand - medium brown, medium to very coarse-grained, moderately poorly sorted, with pebbles to 1/4 in in diameter, loose, dry, no odor
					6			
					7			
					8			
					9			
		0/0		⊗	10			- pebbles to 1/2 inch in diameter, poorly sorted, no odor
					11			
					12			
					13			
					14			
	09:22	1/0		⊗	15			- medium to coarse-grained, moderately sorted, no odor
					16			
					17			
					18			
					19			
	09:27			⊗	20			- as above
					21			NOTES: End of boring at 20 feet. No ground water encountered, no caving. Backfilled boring with soil.
					22			
					23			
					24			
					25			

OWNER: Hawker Pacific  
 LOCATION: 11310 Sherman Way  
 DRILLED BY: Lane - Western  
 METHOD: Hollow-stem auger

BOREHOLE DEPTH: 20 feet  
 BOREHOLE DIAMETER: 8 inches  
 DATE DRILLED: 08/31/90  
 LOGGED BY: JGO

HAWKER PACIFIC  
 11310 SHERMAN WAY

BORING LOG

No. B-7

PAGE 1 of 1

PROJECT No. 58-0605 DATE 09/27/1990 PROJ. MGR. DFTR.

APPENDIX D

LABORATORY ANALYSES OF SOIL SAMPLES



Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878

1250 S. Boyle Ave. Los Angeles, CA 90023. Phone (213) 269-7421 Fax (213) 268-5328

DATE RECEIVED: 08/29/90

DATE REPORTED: 09/05/90

PAGE 1 OF 6

LAB NUMBER: 200524

CLIENT: LAW ENVIRONMENTAL, INC.

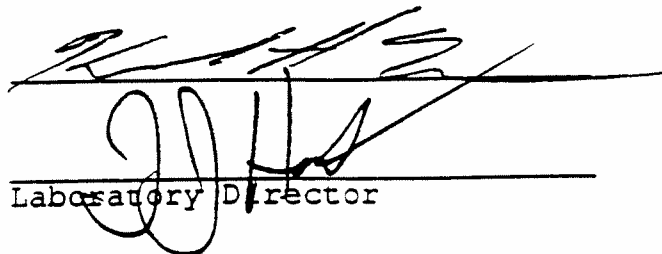
REPORT ON: FOUR SOIL SAMPLES

PROJECT #: 58-0605

LOCATION: HAWKER PACIFIC

RESULTS: SEE ATTACHED

Reviewed By

  
Laboratory Director





Curtis & Tompkins.

LABORATORY NUMBER: 200524  
CLIENT: LAW ENVIRONMENTAL, INC.  
PROJECT #: 58-0605  
LOCATION: HAWKER PACIFIC

DATE RECEIVED: 08/29/9  
DATE ANALYZED: 08/31-0  
DATE REPORTED: 09/05/9  
PAGE 2 OF 6

METHOD: EPA 8015 (MODIFIED)  
TOTAL VOLATILE HYDROCARBONS AS GASOLINE IN SOILS & WASTES  
EXTRACTION: EPA 5030 PURGE & TRAP

LAB ID	SAMPLE ID	TVH AS GASOLINE (ug/Kg)
1	B-1-9	ND (500)
2	B-1-29	ND (500)
3	B-1-49	ND (500)
4	B-1-69	ND (500)

ND = NOT DETECTED; LIMIT OF DETECTION IN PARENTHESES.

QA/QC DATA SUMMARY:

Precision (Relative % Difference): 2  
Accuracy (Spike % Recovery): 101

LABORATORY NUMBER: 200524-1  
CLIENT: LAW ENVIRONMENTAL, INC.  
PROJECT #: 58-0605  
SAMPLE ID: B-1-9

DATE RECEIVED: 08/29/  
DATE ANALYZED: 08/31/  
DATE REPORTED: 09/05/  
PAGE 3 OF 6

METHOD: EPA 8240  
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	TRACE (~4)	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	97 %
Toluene-d8	100 %
Bromofluorobenzene	96 %

LABORATORY NUMBER: 200524-2  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-1-29

DATE RECEIVED: 08/29/01  
 DATE ANALYZED: 08/31/01  
 DATE REPORTED: 09/05/01  
 PAGE 4 OF 6

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	8	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	99 %
Toluene-d8	101 %
Bromofluorobenzene	98 %

LABORATORY NUMBER: 200524-3  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-1-49

DATE RECEIVED: 08/29/98  
 DATE ANALYZED: 08/31/98  
 DATE REPORTED: 09/05/98  
 PAGE 5 OF 6

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	5
1,1,1-Trichloroethane	ND	10
Carbon tetrachloride	ND	5
Vinyl acetate	ND	5
Bromodichloromethane	ND	10
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	5	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

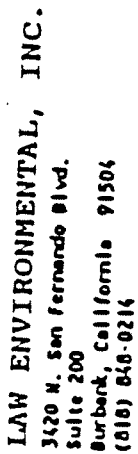
1,2-Dichloroethane-d4	97 %
Toluene-d8	102 %
Bromofluorobenzene	95 %

LABORATORY NUMBER: 200524-4  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-1-69

DATE RECEIVED: 08/29/9  
 DATE ANALYZED: 08/31/9  
 DATE REPORTED: 09/05/9  
 PAGE 6 OF 6

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	8	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5
QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT		
1,2-Dichloroethane-d4	96 %	
Toluene-d8	101 %	
Bromofluorobenzene	95 %	



# CHAIN OF CUSTODY RECORD

[illegible]

**Company**

**Date:**

二二

Relinquished by <i>Dr. J. W. Smith</i>	Received by	Relinquished by
---	-------------	-----------------

Received by

Not required by

Received by

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made. Waterbous samples will be returned to client or disposed of at client expense.

\*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil; PE - Petroleum; OI - Other



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878  
1250 S. Boyle Ave., Los Angeles, CA 90023, Phone (213) 269-7421, Fax (213) 268-5328

DATE RECEIVED: 09/04/90  
DATE REPORTED: 09/10/90  
PAGE 1 OF 10

LAB NUMBER: 200541

CLIENT: LAW ENVIRONMENTAL, INC.

REPORT ON: EIGHT SOIL SAMPLES

PROJECT #: 58-0605

LOCATION: HAWKER PACIFIC

RESULTS: SEE ATTACHED

Reviewed By

*Victor Michalko*  
*[Signature]*  
Laboratory Director

LABORATORY NUMBER: 200541  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 LOCATION: HAWKER PACIFIC

DATE RECEIVED: 09/04/9  
 DATE ANALYZED: 09/06/9  
 DATE REPORTED: 09/10/9  
 PAGE 2 OF 10

METHOD: EPA 8015 (MODIFIED)  
 EXTRACTABLE PETROLEUM HYDROCARBONS IN SOIL  
 EXTRACTION: DHS LUFT PROCEDURE

LAB ID	SAMPLE ID	GASOLINE (mg/Kg)	KEROSENE (mg/Kg)	DIESEL (mg/Kg)
1	B-4-5	ND (10)	ND (10)	110*
2	B-4-20	ND (10)	ND (10)	ND (10)
3	B-5-5	ND (50)	ND (50)	7,300**
4	B-5-25	ND (10)	ND (10)	88***
5	B-6-20	ND (10)	ND (10)	ND (10)
6	B-8-5	ND (10)	ND (10)	ND (10)
7	B-8-20	ND (10)	ND (10)	ND (10)
8	B1A-74'	ND (10)	ND (10)	ND (10)

\* HYDROCARBONS IN DIESEL RANGE, DOES NOT MATCH STD (C19-C30)  
 \*\* HYDROCARBONS IN DIESEL RANGE, DOES NOT MATCH STD (C12-C30)  
 \*\*\* HYDROCARBONS IN DIESEL RANGE, DOES NOT MATCH STD (C17-C30)

ND = NOT DETECTED; PRACTICAL QUANTITATION LIMIT IN PARENTHESES.

QA/QC DATA SUMMARY:

Precision (Relative % Difference): 18  
 Accuracy (Spike % Recovery): 83



LABORATORY NUMBER: 200541-1  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-4-5

DATE RECEIVED: 09/04/9  
 DATE ANALYZED: 09/04-0  
 DATE REPORTED: 09/10/9  
 PAGE 3 OF 10

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	* 370	5
Toluene	40	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	* 1:5 DIL	101 %
Toluene-d8		103 %
Bromofluorobenzene		93 %

LABORATORY NUMBER: 200541-2  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-4-20

DATE RECEIVED: 09/04/  
 DATE ANALYZED: 09/04/  
 DATE REPORTED: 09/10/  
 PAGE 4 OF 10

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	26	5
Toluene	14	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	97 %
Toluene-d8	102 %
Bromofluorobenzene	95 %



Curtis &amp; Tompkins, Ltd.

LABORATORY NUMBER: 200541-3  
CLIENT: LAW ENVIRONMENTAL, INC.  
PROJECT #: 58-0605  
SAMPLE ID: B-5-5

DATE RECEIVED: 09/04/90  
DATE ANALYZED: 09/04-05  
DATE REPORTED: 09/10/90  
PAGE 5 OF 10

METHOD: EPA 8240  
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
-----		
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	42	5
1,1-Dichloroethane	28	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	* 290	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	* 260	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	** 130,000	5
Toluene	150	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	*	1:5 DIL	105 %
Toluene-d8	**	1:1000 DIL	96 %
Bromofluorobenzene			75 %



Curtis &amp; Tompkins.

LABORATORY NUMBER: 200541-4  
CLIENT: LAW ENVIRONMENTAL, INC.  
PROJECT #: 58-0605  
SAMPLE ID: B-5-25

DATE RECEIVED: 09/04/  
DATE ANALYZED: 09/05/  
DATE REPORTED: 09/10/  
PAGE 6 OF 10

METHOD: EPA 8240  
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
-----		
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	16	5
Toluene	TRACE (~3)	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

-----  
QA/QC SUMMARY: SURROGATE RECOVERIES      PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	105 %
Toluene-d8	103 %
Bromofluorobenzene	97 %

-----

LABORATORY NUMBER: 200541-5  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-6-20

DATE RECEIVED: 09/04/  
 DATE ANALYZED: 09/04/  
 DATE REPORTED: 09/10/  
 PAGE 7 OF 10

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	91 %
Toluene-d8	102 %
Bromofluorobenzene	96 %

LABORATORY NUMBER: 200541-6  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-8-5

DATE RECEIVED: 09/04/  
 DATE ANALYZED: 09/04/  
 DATE REPORTED: 09/10/  
 PAGE 8 OF 10

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	13	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	90 %
Toluene-d8	100 %
Bromofluorobenzene	91 %

LABORATORY NUMBER: 200541-7  
CLIENT: LAW ENVIRONMENTAL, INC.  
PROJECT #: 58-0605  
SAMPLE ID: B-8-20

DATE RECEIVED: 09/04/9  
DATE ANALYZED: 09/05/9  
DATE REPORTED: 09/10/9  
PAGE 9 OF 10

METHOD: EPA 8240  
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	ND	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	92 %
Toluene-d8	101 %
Bromofluorobenzene	95 %

LABORATORY NUMBER: 200541-8  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B1A-74'

DATE RECEIVED: 09/04/  
 DATE ANALYZED: 09/05/  
 DATE REPORTED: 09/10/  
 PAGE 10 OF 10

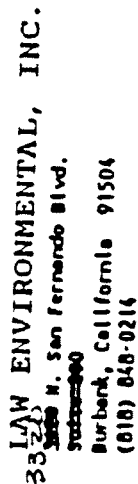
METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	TRACE (~4)	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	90 %
Toluene-d8	102 %
Bromofluorobenzene	93 %





# CHAIN OF CUSTODY RECORD

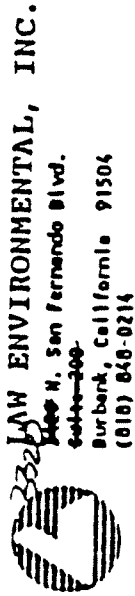
Client Name		Project Number	
Project Name		Project Number	
Report Attention		Sampled by	
Sample Number	Date Sampled	Time Sampled	Type
61A-74	8-31-90	1301	SO
Sample Description		Number of Containers	
6" Brass Tube		1	
<div> <div> <div>8220</div> <div>8050</div> <div>8270</div> </div> <div> <div>XX</div> <div>XX</div> <div>XX</div> </div> </div>			
<div> <div>Analyses Required</div> <div> <div>USE CAUTION</div> <div>may have high levels of PCE + Toluene - up to 500 ppm</div> </div> </div>			
Remarks			

Company	Date	Time
Law Environmental	9/4	12:45
CERIS & Tompkins	9/4/90	12:45

NOTE: Samples are discarded 30 days after results are reported unless other arrangements are made.

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

\*Aq - Aqueous; MA - Monaqueous; SL - Sludge; GV - Ground Water; SO - Soil; PE - Petroleum; OT - Other



# CHAIN OF CUSTODY RECORD

Lab Log Number

Client Name <b>LAW Environmental</b>		Project Number <b>58-0605</b>					
Report Attention <b>Jacki Oberne</b>		Sampled by <b>Jacki Oberne</b>					
Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers	Analyses Required	Remarks
B-4-5	8-21-90	8:51	SO	16" Brass Tube	1	X	May have high lvs of DFE & Toluene up to 500 ppm
B-4-20	8-31-90	9:27	SO	6" " "	1	X	
B-5-5	8-31-90	10:02	SO	" " "	1	X	
B-5-25	8-31-90	10:38	SO	" " "	1	X	Expect low lvs of volatiles
B-6-20	8-31-90	11:31	SO	" " "	1	X	
B-8-5	8-31-90	9:03	SO	" " "	1	X	
B-8-20	8-31-90	9:22	SO	" " "	1	X	

Signature	Company	Date	Time
<i>Jacki Oberne</i>	<b>LAW Environmental</b>	<b>9-4-90</b>	<b>11:15</b>
<i>Chris Tompkins</i>	<b>Chris + Tompkins</b>	<b>9-4-90</b>	<b>11:15</b>

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

\*AQ - Aqueous; NA - Nonaqueous; SL - Sludge; GW - Ground Water; SO - Soil, DE - Petroleum or other



Curtis & Tompkins, Ltd., Analytical Laboratories. Since 1878  
1250 S. Boyle Ave., Los Angeles, CA 90023, Phone (213) 269-7421, Fax (213) 268-5328

DATE RECEIVED: 08/30/90  
DATE REPORTED: 09/13/90  
PAGE 1 OF 8

LAB NUMBER: 200529

CLIENT: LAW ENVIRONMENTAL, INC.

REPORT ON: SIX SOIL SAMPLES

PROJECT #: 58-0605

LOCATION: HAWKER PACIFIC

RESULTS: SEE ATTACHED

Reviewed By



Laboratory Director

LABORATORY NUMBER: 200529  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 LOCATION: HAWKER PACIFIC

DATE RECEIVED: 08/30/90  
 DATE ANALYZED: 09/12/90  
 DATE REPORTED: 09/13/90  
 PAGE 2 OF 8

METHOD: EPA 8015 (MODIFIED)  
 EXTRACTABLE PETROLEUM HYDROCARBONS IN SOIL  
 EXTRACTION: DHS LUFT PROCEDURE

LAB ID	SAMPLE ID	GASOLINE (mg/Kg)	KEROSENE (mg/Kg)	DIESEL (mg/Kg)
1	B-2-5	ND (10)	ND (10)	ND (10)
2	B-2-20	ND (10)	ND (10)	ND (10)
3	B-2-30	ND (10)	ND (10)	ND (10)
4	B-2-40	ND (10)	ND (10)	ND (10)
5	B-3-10	ND (10)	ND (10)	ND (10)
6	B-3-20	ND (10)	ND (10)	ND (10)

ND = NOT DETECTED; PRACTICAL QUANTITATION LIMIT IN PARENTHESES.

QA/QC DATA SUMMARY:

Precision (Relative % Difference): 5  
 Accuracy (Spike % Recovery): 95

LABORATORY NUMBER: 200529-1  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-2-5

DATE RECEIVED: 08/30/98  
 DATE ANALYZED: 09/04/98  
 DATE REPORTED: 09/13/98  
 PAGE 3 OF 8

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	* 450	5
Toluene	70	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	98 %
Toluene-d8	110 %
Bromofluorobenzene	87 %

\* NOTE 1:10 Dilution.

LABORATORY NUMBER: 200529-2  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-2-20

DATE RECEIVED: 08/30/90  
 DATE ANALYZED: 09/04/90  
 DATE REPORTED: 09/13/90  
 PAGE 4 OF 8

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	42	5
Toluene	18	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	107 %
Toluene-d8	103 %
Bromofluorobenzene	106 %

LABORATORY NUMBER: 200529-3  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-2-30

DATE RECEIVED: 08/30/9  
 DATE ANALYZED: 09/04/9  
 DATE REPORTED: 09/13/9  
 PAGE 5 OF 8

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	7	5
Toluene	10	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	103 %
Toluene-d8	101 %
Bromofluorobenzene	109 %



Curtis &amp; Tompkins, L

LABORATORY NUMBER: 200529-4  
CLIENT: LAW ENVIRONMENTAL, INC.  
PROJECT #: 58-0605  
SAMPLE ID: B-2-40

DATE RECEIVED: 08/30/9  
DATE ANALYZED: 09/04/9  
DATE REPORTED: 09/13/9  
PAGE 6 OF 8

METHOD: EPA 8240  
VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
--ug/Kg--		
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	ND	5
Toluene	TRACE (~4)	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	105 %
Toluene-d8	102 %
Bromofluorobenzene	113 %



LABORATORY NUMBER: 200529-5  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-3-10

DATE RECEIVED: 08/30/9  
 DATE ANALYZED: 09/06/9  
 DATE REPORTED: 09/13/9  
 PAGE 7 OF 8

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	21	5
Toluene	18	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	105 %
Toluene-d8	104 %
Bromofluorobenzene	96 %

LABORATORY NUMBER: 200529-6  
 CLIENT: LAW ENVIRONMENTAL, INC.  
 PROJECT #: 58-0605  
 SAMPLE ID: B-3-20

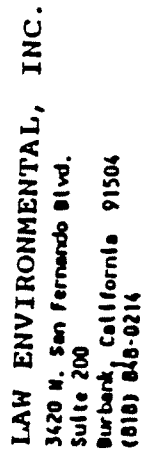
DATE RECEIVED: 08/30/9  
 DATE ANALYZED: 09/06/9  
 DATE REPORTED: 09/13/9  
 PAGE 8 OF 8

METHOD: EPA 8240  
 VOLATILE ORGANICS IN SOIL

COMPOUND	RESULT	PQL
	--ug/Kg--	
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl chloride	ND	10
Chloroethane	ND	10
Methylene chloride	ND	5
Acetone	ND	10
Carbon disulfide	ND	5
Trichlorofluoromethane	ND	5
1,1-Dichloroethene	ND	5
1,1-Dichloroethane	ND	5
cis-1,2-Dichloroethene	ND	5
trans-1,2-Dichloroethene	ND	5
Chloroform	ND	5
Freon 113	ND	5
1,2-Dichloroethane	ND	5
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5
Carbon tetrachloride	ND	5
Vinyl acetate	ND	10
Bromodichloromethane	ND	5
1,2-Dichloropropane	ND	5
cis-1,3-Dichloropropene	ND	5
Trichloroethylene	ND	5
Dibromochloromethane	ND	5
1,1,2-Trichloroethane	ND	5
Benzene	ND	5
trans-1,3-Dichloropropene	ND	5
2-Chloroethylvinyl ether	ND	10
Bromoform	ND	5
2-Hexanone	ND	10
4-Methyl-2-pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5
Tetrachloroethene	20	5
Toluene	25	5
Chlorobenzene	ND	5
Ethyl benzene	ND	5
Styrene	ND	5
Total xylenes	ND	5

QA/QC SUMMARY: SURROGATE RECOVERIES PQL = PRACTICAL QUANTITATION LIMIT

1,2-Dichloroethane-d4	102 %
Toluene-d8	104 %
Bromofluorobenzene	95 %



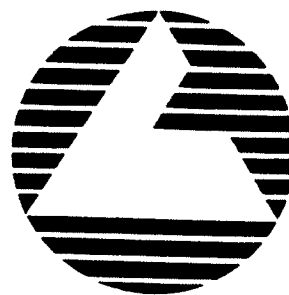
# CHAIN OF CUSTODY RECORD

Client Name		Project Number			
Haw N Environmental		58-0605			
Project Name					
Shower Pacific					
Report Attention		Sampled by			
Juli Osborne		Juli Osborne			
Sample Number	Date Sampled	Time Sampled	Type*	Sample Description	Number of Containers
B-2-5	8-29-90	12:55	SD	6" Brass Tube	1
B-2-10		12:38			
B-2-30		1:25			
B-2-40		2:35			
B-3-10		3:50			
B-3-20		4:30			

Signature		Company	Date	Time
Relinquished by	<i>[Signature]</i>	Law Environmental	8-30-90	1:59
Received by	<i>[Signature]</i>	Curtis & Templeton	8-30-90	13:59
Relinquished by				
Received by				
Relinquished by				
Received by				

NOTE: Samples are allocated to

NOTE: Samples are discarded 30 days after results are reported, unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.



**LAW ENVIRONMENTAL**

---

## **SUBSURFACE SOIL INVESTIGATION**

**SUMP AND UNDERGROUND STORAGE TANK LOCATIONS  
11310 SHERMAN WAY  
SUN VALLEY, CALIFORNIA**

Prepared for

**Hawker Pacific**

**November 26, 1991**



**LAW ENVIRONMENTAL, INC.**

3320 N. SAN FERNANDO BLVD.  
BURBANK, CALIFORNIA 91504  
TEL. (818) 848-0214  
FAX (818) 848-1674

November 26, 1990

Hawker Pacific  
11310 Sherman Way  
Sun Valley, CA 91352

Project No. 58-0605

Attention: Mr. Erik Johnson

Gentlemen:

We are pleased to present our report entitled "Subsurface Soil Investigation, Sump and Underground Storage Tank Locations, 11310 Sherman Way, Sun Valley, California". This report presents the results of our limited subsurface investigation conducted at the sump and underground storage tank locations in the alley between Buildings 1 and 2 at the above-referenced property. The investigation was authorized by Mr. Erik Johnson of Hawker Pacific on August 6, 1990 (your Purchase Order No. 32727).

We appreciate the opportunity to have worked with you on this project. If you have any questions or require further assistance, please do not hesitate to call us.

Respectfully submitted,

**LAW ENVIRONMENTAL, INC.**

Juli G. Osborne  
Staff Environmental Geologist

Thomas M. Regan  
Project Environmental Geologist

Glenn A. Brown, C.E.G. 3  
Principal Geologist

JO/pr/0605.RPT



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**SUBSURFACE SOIL INVESTIGATION**  
**SUMP AND UNDERGROUND STORAGE TANK LOCATIONS**  
**11310 SHERMAN WAY**  
**SUN VALLEY, CALIFORNIA**

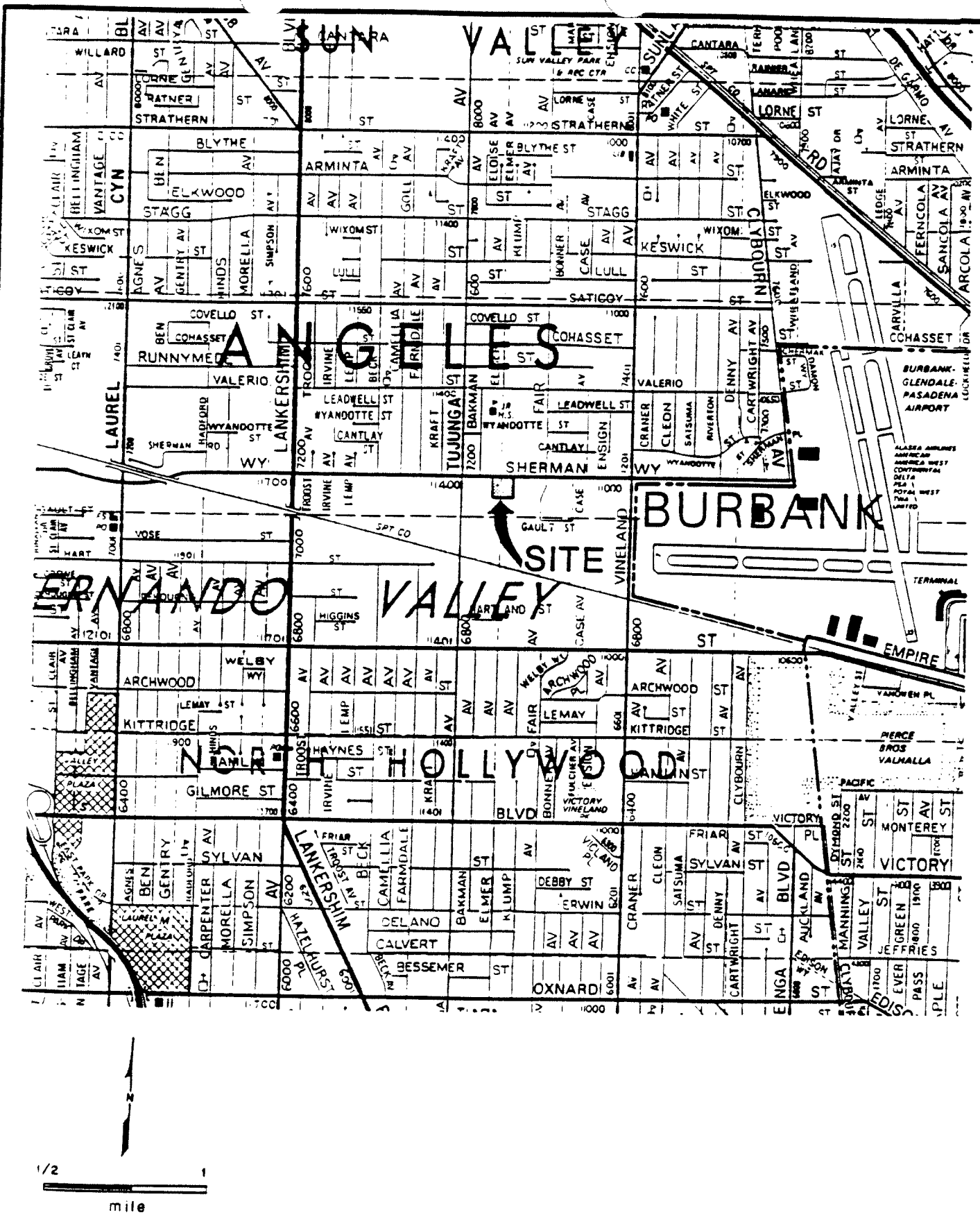
**INTRODUCTION**

Law Environmental, Inc., (LAW) was retained by Hawker Pacific to perform a limited subsurface soil investigation in the alley located between Building 1 and Building 2 at 11310 Sherman Way in Sun Valley, California (Figure 1). This investigation was authorized by Mr. Erik Johnson on August 6, 1990 (your Purchase Order No. 32727).

Our professional services have been performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has been prepared for Hawker Pacific and is directed towards complying with their specific needs. The report has not been prepared for use by other parties, and may not contain sufficient information for the purposes of other parties or other uses. Any use, interpretation, or emphasis other than that contained herein, is done at the reader's own risk.



PROJECT No. 58-0612 DATE 10/8/90 PROJ MOR J.O. DFT. N.G.



HAWKER PACIFIC  
SAN FERNANDO VALLEY, CA.

# LOCATION MAP

Proj. No.  
58-0612



FIGURE 1



**LAW ENVIRONMENTAL, INC.**

3320 N. SAN FERNANDO BLVD.  
BURBANK, CALIFORNIA 91504  
TEL. (818) 848-0214  
FAX (818) 848-1674

May 22, 1991

---

Hawker Pacific  
11310 Sherman Way  
Sun Valley, CA 91352

Attention: Mr. Erik Johnson

Subject: Proposal for Tank Removal  
Contamination Assessment and Remediation  
11310 Sherman Way, Sun Valley, California  
Law Environmental Proposal No. 58-0225

As we discussed in our phone conversation on December 28, 1990, Law Environmental, Inc. (Law) is pleased to present this proposal for a tank removal, contamination assessment and remediation at this site. Previous investigations at the site (Subsurface Soil Investigation, Law Project No. 58-0605, November 26, 1990) indicate the presence of a small underground storage tank and a sump on-site. The soils beneath the tank and sump are contaminated with tetrachloroethene (PCE). We understand that Hawker Pacific is requesting further assessment of the vertical and lateral extent of contamination at the site, and that remediation of the soil by vapor extraction be conducted. The proposed investigation is based on our current understanding of the project requirements and knowledge of general soil conditions in the area.

## **SCOPE OF SERVICES**

### **Underground Storage Tank Removal**

Underground fuel storage tank removal requires a permit from the Los Angeles County Department of Public Works (DPW), Waste Management Division. The DPW permit requirements include notification of DPW, the City of Los Angeles Fire Department, and the South Coast Air Quality Management District (AQMD). They must be notified 72 hours before the tank removal so inspectors from the county and the fire department can be present to observe tank removal activities. The permit also requires samples to be collected from beneath the tank. Because personnel at Hawker Pacific do not know the

former contents of the tank, Los Angeles County DPW requires that soil samples must be analyzed for volatile organics (EPA Method 8240), base neutral/acids extractables (EPA Method 8270), pesticides/PCBs (EPA Method 8080), metals (EPA Method 6010/7000) and total petroleum hydrocarbons (EPA Method 8015).

When the tank is removed, excavation and removal must be monitored with a device capable of detecting parts per million (ppm) levels of hydrocarbon vapors in the air. If readings over 50 ppm are observed, the work must stop, and a permit from the AQMD must be obtained. The AQMD permit conditions may include continuous air monitoring, restrictions on methods of excavation, and covering the excavation, as well as other requirements.

We understand from a memo dated January 23, 1990, to Mr. Erik Johnson from M. H. Loe, that the Fire Department will allow the tank to be pulled on the original permit. Law personnel will observe the removal of the tank and appurtenances, and will monitor the excavation with an AQMD-approved organic vapor detector. Law will collect a soil sample from beneath the tank as required by DPW. A letter-report will be prepared describing soil sampling procedures, soil gas readings, and an evaluation of analytical findings. At this time, information from previous studies at the site may be included in the report to DPW.

#### **Soil Contamination Assessment**

The lateral extent of PCE contamination at the site was found in a previous investigation, as shown on Figure 1. This study found that the contamination extended to a depth of 74 feet (toluene  $\approx$  4 parts per billion [ppb], PCE = ND <5 ppb). Law proposes to drill a deep boring to confirm that the contamination has not migrated to the water table. We propose to drill one 120-foot deep boring at the western end of the alley between Buildings 1 and 2. Because the alley is inaccessible, the drill rig would have to be located in the parking lot of the neighboring property. The borings will be drilled using 8 or 10-inch diameter, hollow-stem flight auger drilling equipment. All augers will be steam-cleaned before starting work, and upon completion of each boring to preclude cross-contamination. Soil samples will be collected at 5-foot intervals using a modified California split-spoon sampler. Ten to 15 samples will be analyzed for purgeable organics and extractable petroleum hydrocarbons by EPA Method 8240 and Modified EPA Method 8015, respectively. The soil samples will not be tested for any additional parameters, unless these are specifically requested by the client in writing.

All drill cuttings with visual or olfactory evidence of contamination will be impounded in DOT 17H rated drums. Contaminated cuttings will be turned over to the client for lawful disposal in accordance with all applicable federal, state and local regulations and ordinances. The client will be informed of the results of the chemical analyses, and advised as to the proper means of disposal. If contaminated soils are encountered, the borings will be sealed with a bentonite/cement slurry, or the equivalent, and patched with asphalt or concrete. THE ESTIMATED FEE DOES NOT INCLUDE THE COST OF ALTERNATIVE

## BACKFILL MATERIALS, SOIL CONTAINERIZATION OR DISPOSAL BY LAW ENVIRONMENTAL, INC.

### Soil Vapor Extraction

Law is confident that soil vapor extraction, when compared to alternative methods, will be an effective way to significantly reduce PCE and toluene concentrations within site soils. The underlying alluvial soils are predominantly composed of sand and gravel, but a small amount of clay may be present. Therefore, we cannot say that levels can be reduced to one ppm or less, because the clay content of the site soil will affect the amount of adsorption.

Soil vapor extraction is generally considered a fairly long-term remedial measure, commonly requiring one to two years or more for completion. We estimate that 90 percent removal of recoverable PCE and toluene may be achieved within the first six months of operation of a full scale system. Operation and maintenance costs should be minimal following the initial six months of operation, exclusive of many restrictions and monitoring requirements which may be imposed by regulatory agencies.

Vapor extraction methodology involves mechanically inducing a reduced pressure within the entire zone of soil contamination by means of an electrically powered blower manifolded to the extraction wells. The soil vapor extraction system will utilize activated carbon canisters as a means of collecting extracted organic vapors. Spent activated carbon canisters, a hazardous waste, are transported to a hazardous waste disposal facility for incineration. This process destroys the organic compounds and terminates the associated environmental liability for the generator of the hazardous waste.

Six 25-foot deep extraction wells will be installed adjacent to the sump area (Figure 1). The borings will be logged by a geologist and cuttings will be screened using a Foxboro 108GC Organic Vapor Analyzer (OVA). The wells will consist of PVC pipe, slotted in the lower part, surrounded by an appropriate granular packing material (coarse sand or gravel) and sealed with moistened granular bentonite. The wells will be connected to a manifold leading to the suction/blower assembly and carbon canisters.

All well header assemblies and pipe leading to the manifold can be placed beneath the existing parking lot, if necessary. We propose to place the manifold along the perimeter of the alley and place all other aboveground equipment on the cement platform to the north of the tank and sump (see Figure 1). If not already present, a 110/220 volt electrical service must be extended to the building exterior at this location.

After an operating permit is received from the South Coast Air Quality Management District (SCAQMD), we will begin system operation. The air stream from the blower assembly will be monitored at intervals with a portable organic vapor analyzer calibrated to provide a direct readout concentration in parts per million (ppm).

**FEE ESTIMATE**

We propose to perform the investigation in three phases. Estimated fees for each phase are outlined below:

**Phase 1: Tank Pull**

• Subcontractor services (includes permits, tank removal and disposal, sampling and analysis, clean fill)*	\$ 5,570
• Consulting services (includes observation of on-site work, data evaluation and report preparation)	\$ 3,000
• Expenses (vehicle, equipment rental)	<u>\$ 250</u>
<b>Subtotal</b>	<b>\$ 8,820</b>

**Phase 2: Contamination Assessment**

• Subcontractor services (drilling)*	\$ 5,610
• Laboratory analyses (30 samples by EPA Method 8240 and Modified EPA Method 8015)*	\$ 8,000
• Consulting services (includes observation of on-site work, sampling, data evaluation and report preparation)	\$ 7,250
• Expenses (includes travel, sampling supplies, equipment rental and miscellaneous fees)	<u>\$ 1,350</u>
<b>Subtotal</b>	<b>\$22,210</b>

**Phase 3: Soil Vapor Extraction System**

• Work Plan (includes Health and Safety Plan)	\$ 2,100
• Vapor Extraction System (includes purchase and delivery of skid-mounted unit)	\$18,440
• Installation of system	\$ 2,960
• Supervision of installation of vapor extraction system and quality control (includes periodic monitoring as required by permit)	\$ 2,400
• Expenses (includes system materials, permits, equipment rental, vehicles and miscellaneous fees)	<u>\$ 2,000</u>
	Subtotal \$27,900
	<b>TOTAL <u>\$58,930</u></b>

- \* Fees for contractor services will be billed directly to the client. Contractor fees in this estimate are shown without the 15 percent surcharge.

Law proposes to perform the above-mentioned services for an estimated cost of \$58,930; \$18,350 is the fee estimated for consulting services, \$40,580 is the estimated fee for the contractor services. The fee for consulting services will not be exceeded by more than 10 percent without prior authorization of Hawker Pacific.

**TERMS AND CONDITIONS**

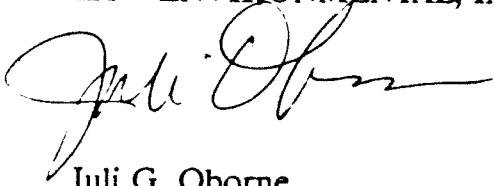
The fee for our service is based on the rates given in the attached Schedule of Charges. If acceptable, please indicate your acceptance of this proposal by signing the attached Proposal Acceptance Sheet and returning one copy to our office. It should be noted that Law Environmental, Inc. is on a computerized accounting system that issues invoices every 28 days. The invoices are for charges during the preceding billing period and are not cumulative. Invoices may be received before the particular project assignment or task is completed. Final billing will be so noted on the final invoice.

The terms on the reverse side of the Proposal Acceptance Sheet are an integral part of our contract for professional services. By authorizing our services, you confirm that you have read this contract and the terms, and accept the Limitation of Liability provided for in the paragraph titled "Professional Liability". If you wish to increase our liability coverage as computed in the paragraph, please provide a written request at the time of the proposal acceptance.

We appreciate the opportunity to provide our services for your project. We look forward to receiving your written authorization to proceed. If you have any questions regarding this proposal, please do not hesitate to contact our office.

Sincerely,

**LAW ENVIRONMENTAL, INC.**

A handwritten signature in cursive script, appearing to read "Juli Osborne".

Juli G. Osborne  
Project Environmental Geologist

A handwritten signature in cursive script, appearing to read "Glenn A. Brown".

Glenn A. Brown, C.E.G. 3  
Principal Geologist

JO/ks/0225.PRO  
Attachment



## PROPOSAL ACCEPTANCE SHEET

Identification of Services Tank Removal, Contamination Assessment, Remediation

Project Name Hawker Pacific

Project Location 11310 Sherman Way, Sun Valley, CA

Proposal No. and Date 58-0225 May 22, 1991

Consultant's Branch Designation Burbank

### CLIENT

Name Hawker Pacific

Address 11310 Sherman Way

Sun Valley, CA Zip Code 91352 Phone number (818) 765-6201

Attention: Erik Johnson Title Hazardous Waste Engineer

### FOR NOTICES: (if different)

Client: Name \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_ Phone number \_\_\_\_\_

Consultant: Name \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_ Phone number \_\_\_\_\_

SPECIAL INSTRUCTIONS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### PROPOSAL ACCEPTANCE

The Terms and Conditions of this Proposal, including the terms and conditions on this and the attached pages are:

Accepted this 31<sup>st</sup> day of May 19 91

HAWKER PACIFIC, INC.

Print or type individual, firm or corporate body name

Jeff B. Belzer  
Signature of authorized representative

JEFF B. BELZER, VICE PRESIDENT, ADMINISTRATION & FINANCE  
Print or type name of authorized representative and title



## TERMS AND CONDITIONS

1. **SERVICES TO BE PROVIDED.** Law Environmental, (hereinafter LAW) is an independent consultant and agrees to provide Client, for its sole benefit and exclusive use, consulting services set forth in our proposal.

2. **PAYMENT TERMS.** Client agrees to pay our invoice upon receipt. If payment is not received within 30 days from the invoice date, Client agrees to pay a service charge on the past due amount at the prevailing legal rate, including reasonable attorney's fees if collected through an attorney, and LAW reserves the right to suspend all work until payment is received. No deduction shall be made from our invoice on account of liquidated damages or other sums withheld from payments to contractors or others.

Either party may terminate this Agreement without cause upon 30 days written notice. In the event Client requests termination prior to completion of the proposed services, Client agrees to pay LAW for all costs incurred plus reasonable charges associated with termination of the work.

3. **STANDARD OF CARE.** LAW will perform its services using that degree of care and skill ordinarily exercised under similar conditions by reputable members of our profession practicing in the same or similar locality. NO OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE OR INTENDED BY OUR PROPOSAL OR BY OUR ORAL OR WRITTEN REPORTS.

4. **INSURANCE.** LAW maintains insurance coverage as follows:

- (a) Worker's Compensation Insurance - statutory.
- (b) Employer's Liability Insurance - \$1,000,000.
- (c) Commercial General Liability Insurance - \$2,000,000/\$3,000,000.
- (d) Automobile Liability Insurance - \$1,000,000/\$1,000,000.
- (e) Excess Umbrella - \$1,000,000 (on c & d)

5. **PROFESSIONAL LIABILITY:** Client agrees that LAW's liability to Client or any third party due to any negligent professional acts, errors or omissions or breach of contract will be limited to an aggregate of \$50,000 or our total fee, whichever is greater. If Client prefers to have higher limits of professional liability, we agree to increase the limit up to a maximum of \$1,000,000 upon Client's written request at the time of accepting our proposal, provided Client agrees to pay an additional consideration of ten percent of our total fee, or \$500, whichever is greater. The additional charge for the higher liability limit is because of the greater risk assumed by us and is not a charge for additional professional liability insurance.

6. **SITE OPERATIONS.** Client will arrange for right-of-entry to the property for the purpose of performing studies, tests and evaluations pursuant to the agreed services. Client represents that it possesses necessary permits and licenses required for its activities at the site.

LAW's field personnel are trained to initiate field testing, drilling and/or sampling within a reasonable distance of each designated location. Our field personnel will avoid hazards or utilities which are visible to them at the site. If we are advised or given data in writing that reveals the presence or potential presence of underground or overground obstructions, such as utilities, we will give special instructions to our field personnel. LAW is not responsible for any damage or loss due to undisclosed or unknown surface or subsurface conditions, owned by Client or third parties. Except as such damage or loss is a result of our sole negligence, Client agrees to indemnify us from any such claims, suits or losses, including reasonable attorney's fees, resulting therefrom.

We will take reasonable precautions to minimize damage to the property caused by our operations. Unless otherwise stated in our proposal, our fee does not include cost of restoration due to any related damage which may result. If Client requests us to repair such damage, we will do so at an additional cost.

Field tests or boring locations described in our report or shown on sketches are based on specific information furnished by others or estimates made in the field by our personnel. Such dimensions, depths or elevations should be considered as approximations unless otherwise stated in our proposal or report.

7. **FIELD REPRESENTATIVE.** The presence of our field personnel, either full-time or part-time, may be for the purpose of providing project administration, assessment, observation and/or field testing of specific aspects of the project as authorized by Client. Should a contractor(s) not retained by us be involved in the project, Client will advise contractor(s) that our services do not include supervision or direction of the actual work of the contractor(s), his employees or agents. Client will also inform contractor that the presence of our field representative for project administration, assessment, observation or testing will not relieve the contractor of his responsibilities for performing the work in accordance with the plans and specifications.

If a contractor (not a subcontractor of LAW) is involved in the project, Client agrees, in accordance with generally accepted construction practices, that the contractor will be solely and completely responsible for working conditions on the jobsite, including safety of all persons and property during performance of the work, and compliance with OSHA regulations. These requirements will apply continuously and will not be limited to normal working hours. It is agreed that LAW will not be responsible for job or site safety on the project, other than for our employees and subcontractors, and that we do not have the duty or right to stop the work of the contractor.

8. **UNFORESEEN CONDITIONS OR OCCURRENCES.** It is possible that unforeseen conditions or occurrences may be encountered which could substantially alter the necessary services or the risks involved in completing our services. If this

occurs, we will promptly notify and consult with Client, but will act based on our sole judgment where risk to our personnel is involved. Possible actions could include:

- (a) Complete the original Scope of Services in accordance with the procedures originally intended in our Proposal, if practicable in our judgment;
- (b) Agree with Client to modify the Scope of Services and the estimate of charges to include study of the unforeseen conditions or occurrences, with such revision agreed to in writing;
- (c) Terminate the services effective on the date specified by us in writing.

**9. SAMPLE DISPOSAL.** Test specimens or samples generally are consumed or substantially altered during testing and are disposed of immediately upon completion of tests. Drilling samples and other specimens are disposed of 30 days after submission of our report.

a. **NON-HAZARDOUS SAMPLES.** At Client's written request, LAW will retain preservable test specimens or the residue therefrom for 30 days after submission of our report free of storage charges. After the initial 30 days and upon written request, we will retain test specimens or samples for a mutually acceptable storage charge and period of time. Client agrees that we are not responsible or liable for any loss of test specimens or samples retained in storage.

b. **\*HAZARDOUS OR POTENTIALLY HAZARDOUS SAMPLES.** In the event that test samples contain constituents deemed hazardous by federal, state or local regulations, LAW will: 1) return such samples to Client; or, 2) using a manifest signed by Client as generator and at additional cost, have such samples transported to a location selected by Client for proper final disposal. Client agrees to pay all costs associated with the storage, transport, and disposal of samples. Client recognizes and agrees that LAW is acting as a bailee and at no time assumes title to said materials.

**10. \* CLIENT DISCLOSURE.** Client agrees to advise LAW upon execution of this Agreement of any hazardous substance or any condition, known or that reasonably should be known by Client, existing in, on, or near the site that present a potential danger to human health, the environment, or equipment. Client agrees to provide continuing information as it becomes available to the Client in the future. By virtue of entering into this Agreement or providing services hereunder, we do not assume control of or responsibility for the site or the person in charge of the site, or undertake responsibility for reporting to any federal, state or local public agencies any conditions at the site that may present a potential danger to public health, safety or the environment. Client agrees under advice of Client counsel to notify the appropriate federal, state or local public agencies as required by law, or otherwise to disclose, in a timely manner, any information that may be necessary to prevent damage to human health, safety, or the environment.

**11. \* ENVIRONMENTAL INDEMNITY.** In connection with toxic or hazardous substances or constituents and to the maximum extent permitted by law, Client agrees to defend, hold harmless and indemnify LAW from and against any and all claims and liabilities, unless caused by our sole negligence or willful misconduct, resulting from:

- (a) Client's violation of any federal, state, or local statute, regulation or ordinance relating to the management or disposal of toxic or hazardous substances or constituents;
- (b) Client's undertaking of or arrangement for the handling, removal, treatment, storage, transportation or disposal of toxic or hazardous substances or constituents found or identified at the site;
- (c) Toxic or hazardous substances or constituents introduced at the site by Client or third persons before or after the completion of services herein; and,
- (d) Allegations that LAW is a handler, generator, operator, treater, storer, transporter, or disposer under the Resource Conservation and Recovery Act of 1976 as amended or any other similar federal, state or local regulation or law due to the services provided under this Agreement.

If a third party brings suit or claim for damages against LAW alleging personal injury (including death) or property damage from exposure to or release of toxic or hazardous substances or constituents at or from the project site before, during or after the services of this Agreement, Client agrees to the maximum extent permitted by law to defend LAW and pay on our behalf any judgment resulting against us, including interest thereon, unless such injury or damage is caused by our sole negligence or willful misconduct.

**12. \* EQUIPMENT CONTAMINATION.** We will endeavor to clean our laboratory and field equipment which may become contaminated in the conduct of our services. Occasionally, such equipment cannot be completely decontaminated because of the type of hazardous materials encountered. If this occurs, it will be necessary to dispose of the equipment in a manner similar to that indicated for hazardous samples and to charge Client for the loss. Client agrees to pay the fair market value of any such equipment and reasonable disposal costs.

**13. DOCUMENTS.** LAW will furnish to Client the agreed upon number of reports and supporting documents. These instruments of services are furnished for Client's exclusive internal use and reliance in connection with the project or services provided for in this Agreement, not for advertising or other type of distribution or general publication, and are subject to the following. For any other purposes, all documents generated by LAW under this Agreement shall remain the sole property of LAW. Client agrees to obtain our written permission for any exception for use not described here. Any unauthorized

use or distribution shall be at Client's and recipient's sole risk and without liability to LAW.

If Client desires LAW to provide our report(s) to a third party (other than Client's counsel or appropriate regulatory bodies) for that party's reliance, LAW will agree to such release provided we obtain written acceptance from the third party to be bound by the similar terms and conditions of our "Secondary Client" agreement which is available on request. Reports provided for information only will not require the Secondary Client agreement. Client acknowledges and agrees to inform any such third party that the LAW report(s) reflects conditions only at the time of the study and may not reflect conditions at a later time.

Client agrees that all documents furnished to Client or Client's agents or designees, if not paid for, will be returned upon demand and will not be used by Client or any other entity for any purpose whatsoever. Client further agrees that documents produced by LAW pursuant to this Agreement will not be used at any location or for any project not expressly provided for in this Agreement without our written approval.

Client shall furnish documents or information reasonably within Client's control and deemed necessary by us for proper performance of our services. LAW may rely upon Client-provided documents in performing the services required under this Agreement; however, LAW assumes no responsibility or liability for their accuracy. Client-provided documents will remain the property of Client.

**14. CLAIMS.** The parties agree to attempt to resolve any dispute without resort to litigation. However, in the event a claim is made that results in litigation, and the claimant does not prevail at trial, then the claimant shall pay all costs incurred in defending the claim, including reasonable attorney's fees. The claim will be considered proven if the judgment obtained and retained through any applicable appeal is at least ten percent greater than the sum offered to resolve the matter prior to the commencement of trial.

**15. OPINIONS OF COST.** If requested, LAW will use its best efforts and experience on similar projects to provide realistic opinions or estimates of costs for installation of materials, remediation or construction as appropriate based on reasonably available data, our designs or our recommendations. However, such opinions are intended primarily to provide information on the order of magnitude or scale of such costs and are not intended for use in firm budgeting or negotiation unless specifically agreed otherwise in advance, in writing with LAW. Client understands actual costs of such work depend heavily on regional economics, local construction practices, material availability, site conditions, weather conditions, contractor skills, and many other factors beyond our control.

**16. TESTIMONY.** Should LAW or any employee of LAW be called or asked to provide testimony or other evidence by any

party, whether at deposition, hearing or trial, in relation to services provided under this Agreement, LAW shall be compensated by Client for the associated reasonable expenses and labor at appropriate unit rates to the extent the party compelling or requesting the testimony does not provide such compensation.

**17. CONFIDENTIALITY.** LAW will maintain as confidential any documents or information provided by Client indicated to be confidential and will not release, distribute or publish to any third party without prior permission from Client, except as compelled by order of a court or regulatory body of competent jurisdiction and then only after notice to Client.

**18. SEVERABILITY.** In the event that any provision of this Agreement is found to be unenforceable, the other provisions shall remain in full force and effect.

**19. SURVIVAL.** All obligations arising prior to the termination of this Agreement and all provisions of this Agreement allocating responsibility or liability between Client and LAW shall survive the completion of the services and the termination of this Agreement.

**20. INTEGRATION.** This Agreement, the attached documents and those incorporated herein constitute the entire Agreement between the parties and cannot be changed except by a written instrument signed by both parties.

**21. GOVERNING LAW.** This Agreement shall be governed in all respects by the laws of the State of Georgia.

\* Applies only if toxic or hazardous substances or constituents are anticipated or encountered.

**END OF DOCUMENT**

## OCCUPATIONAL CONTROL PROCEDURES (Continued)

**Respiratory****Protection:**

Use NIOSH approved equipment when exposure to mist or aerosols is possible or when working with product at elevated temperature. Consult respirator manufacturer to determine appropriate type equipment for given application.

**Ventilation:**

Provide ventilation to minimize exposure. Local exhaust ventilation preferred.

**Airborne****Exposure Limits:**

No permissible exposure limit or threshold limit value has been established by OSHA or the ACGIH for SKYDROL 500B-4 fire resistant hydraulic fluid, although two constituents of the product does have exposure guidelines.

Tributyl Phosphate (CAS No. 126-73-8)

OSHA PEL/TWA: 5 mg/m<sup>3</sup> (0.4 ppm)

ACGIH TLV®/TWA: 2.5 mg/m<sup>3</sup> (0.2 ppm)

ACGIH TLV/STEL: 5 mg/m<sup>3</sup> (0.4 ppm) SHORT TERM EXP. LIMIT  
8 HOUR DAY

2,6-di-tert-butyl-p-cresol (CAS No. 128-37-0)

ACGIH TLV/TWA: 10 mg/m<sup>3</sup>

ACGIH TLV/STEL: 20 mg/m<sup>3</sup> SHORT TERM EXP. LIMIT

## FIRE PROTECTION INFORMATION

**Auto Ignition Temperature:** 750°F (Min.)

**Method:** ASTM D-2155

**Flash Point:** 320°F (Min.)

**Method:** Cleveland Open Cup

**Fire Point:** 350°F (Min.)

**Method:** Cleveland Open Cup

**Extinguishing Media:** Water spray, foam, dry chemical, CO<sub>2</sub> or other agents suitable for Class B fires.

**Special Firefighters Procedures:**

Wear self-contained breathing apparatus when exposed to products of combustion. Wear protective equipment to minimize skin contact.

**Unusual Fire Hazards:**

Phosphorus oxide fumes may be produced during fires.

## REACTIVITY DATA

**Stability:**

Product is stable under normal conditions of storage and under continued use up to approximately 200-225°F.

**Materials to Avoid:**

Exposure to strong oxidizing agents may result in generation of heat and combustion products.

**Hazardous Decomposition Products:**

Oxides of phosphorus may form. No other uniquely hazardous decomposition products are expected. If the product is burned, as with any organic material, carbon monoxide and soot can be produced.

**Hazardous Polymerization:**

Does not occur.

## PHYSIOLOGICAL EFFECTS SUMMARY

**Human Experience**

Repeated contact with SKYDROL 500B-4 fire resistant hydraulic fluid may cause drying or cracking of exposed skin. Eye contact may produce marked pain but does not cause eye damage.

(Physiological Effects Summary Continued On Next Page)

## PHYSIOLOGICAL EFFECTS SUMMARY (Cont'd)

**Animal Data**

Oral LD<sub>50</sub> (Rat): 2,200 mg/kg, Slightly Toxic

Dermal LD<sub>50</sub> (Rabbit): Greater than 7,940 mg/kg, Practically Nontoxic

Eye Irritation (Rabbit): (FHSA) 2.4 on a scale of 110.0, Slightly Irritating

Skin Irritation (Rabbit): (FHSA) 2.5 on a scale of 8.0, Slightly Irritating

Patch testing of 53 human volunteers with SKYDROL 500B-4 fluid produced no positive reaction following initial application; 16 out of 53 subjects displayed reactions during subsequent exposures. No reaction was observed on rechallenge 2 weeks later. SKYDROL 500B-4 fluid is not considered a primary irritant or a sensitizing agent, but on repeated exposure, may be a cumulative irritant to some individuals.

## PHYSICAL DATA

**Appearance:** Clear, purple, oily liquid

**Boiling Point @ 267 mm Hg**  
**(Based on Vapor**

**Pressure Data):** ~257°F

**Pour Point:** -80°F (Maximum)

**Specific Gravity @ 25/25°C:** 1.052-1.060

**Viscosity @ 100°F:** 11.3-12.10 cs

**Refractive Index, n 25/D:** 1.466 - 1.474

**Note:** These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

## SPILL, LEAK &amp; DISPOSAL INFORMATION

**Waste Disposal:** Waste should be incinerated or disposed of in a hazardous waste landfill. Either disposal route should be in accordance with all local, state or federal regulations. This material should not be spilled, dumped, rinsed, or washed into sewers or public waterways.

**Spill or Leakage**

**Procedures:** Absorb spilled or leaked material on clay, sawdust, or other absorbent material.

## ADDITIONAL COMMENTS

## Environmental Toxicity Information:

96-hr LC<sub>50</sub> Trout: 2.6 ppm, Moderately Toxic

96-hr LC<sub>50</sub> Fathead Minnow: 3.0 ppm, Moderately Toxic

48-hr EC<sub>50</sub> *Daphnia*: 6.5 ppm, Moderately Toxic

96-hr EC<sub>50</sub> Algae - Cell Count: 8.9 ppm, Moderately Toxic

96-hr EC<sub>50</sub> Algae - Chlorophyll: 7.1 ppm, Moderately Toxic

Product Qualifies under the following specifications:

BMS 3-11F, Type IV, Class 2, Grade A

DMS 2014C, Type IV, Class 2

LAC MS C-34-1224, Type IV

SAE AS 1241A, Type IV, Class 2

NSN 9150-00-857-9069

# Monsanto MATERIAL SAFETY DATA

Page 4 of 4

**DATE:** 12-21-84  
**MSDS NO.:** M00006729

**SUPERSEDES:** 11/1/83

FOR ADDITIONAL NON-EMERGENCY INFORMATION, CONTACT:

Monsanto Company  
800 North Lindbergh Boulevard  
St. Louis, MO 63167  
314-694-1000

Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Monsanto Company makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Monsanto Company be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

This form has been approved by the Occupational Safety and Health Administration as "equivalent to" OSHA Form 20.

Skydrol® is a registered trademark of Monsanto Company.

TLV® is a registered trademark of the American Conference of Governmental Industrial Hygienists. (ACGIH)

SKYDROL® 500B-4 Fluid

MATERIAL SAFETY DATA

# Material Information Bulletin



(Approved - "Essentially Similar" to Form OSHA 20, Material Safety Data Sheet)

## CHEVRON PEARL KEROSENE

CMS 217105

**DANGER!** HARMFUL OR FATAL IF SWALLOWED  
COMBUSTIBLE  
KEEP OUT OF REACH OF CHILDREN

### TYPICAL COMPOSITION

Paraffins (incl. naphthenes)	98%
Aromatics	
C <sub>8</sub> <sup>+</sup>	2%
Benzene	<0.1%

### EXPOSURE STANDARD

The suggested Threshold Limit Value is 275 ppm (parts of vapor per million parts of air) for a daily 8-hour exposure. No OSHA exposure standard has been established.

### PHYSIOLOGICAL & HEALTH EFFECTS

Not expected to cause eye irritation. Application into the eyes of rabbits produced no observable signs of membrane irritation.

Prolonged or frequently repeated contact may cause skin irritation or may cause the skin to become cracked or dry from the defatting action of this material. Application onto the skin of rabbits produced moderate erythema and edema. See Additional Health Data.

Breathing the vapors at concentrations above the exposure standard can cause central nervous system depression. See Additional Health Data.

Not expected to be acutely toxic by ingestion. The acute oral LD<sub>50</sub> (rat) was greater than 10 g/kg. See Additional Health Data.

Chevron Environmental Health Center/P.O. Box 1272, Richmond, CA 94802  
Emergency Phone Number (415) 233-3737

Page 1 of 2

### EMERGENCY & FIRST AID PROCEDURES

#### Eyes

Wash eyes with fresh water for at least 15 minutes. If irritation continues, see a doctor.

#### Skin

Wash thoroughly with soap and water following skin contact. Launder contaminated clothing.

L.T. "LEE" SAWYER, INC.

JOBBER

SHELL OIL & SHELL CHEMICAL PRODUCTS

14117 Gentry St., Van Nuys, CA

785-8180 Box 359, Van Nuys, CA 91408

#### Inhalation

If there are signs or symptoms, as described in this bulletin, due to breathing this material, move the person to fresh air. If breathing has stopped, apply artificial respiration. Call a doctor immediately.

#### Ingestion

If swallowed, DO NOT make person vomit. Call a doctor immediately.

## ADDITIONAL HEALTH DATA

See Page 3

### SPECIAL PROTECTIVE INFORMATION

**Eye Protection:** Avoid contact with eyes. Eye contact can be avoided by wearing chemical safety goggles.

**Skin Protection:** Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing impervious protective clothing including rubber gloves.

**Respiratory Protection:** Wear approved respiratory protection such as an organic vapor cartridge or an air-supplying respirator unless ventilation equipment is adequate to keep airborne concentrations below the exposure standard.

**Ventilation:** Use adequate ventilation to keep airborne concentrations of this material below the exposure standard.

### FIRE PROTECTION

Liquid evaporates and forms vapors (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85°F.

**Flash Point:** (TCC) 52°C (125°F) Min.

**Autoignition Temp.:** 260°C (500°F)

**Flammability Limits:** 0.9 - 6.0%

**Extinguishing Media:** CO<sub>2</sub>, Dry Chemical, Foam, Water Spray

**Special Fire Fighting Procedures:** For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment. This may include self-contained breathing apparatus to protect against the hazardous effects of normal products of combustion or oxygen deficiency. Read the entire bulletin.

### SPECIAL PRECAUTIONS

See Page 3

The above information is based on data of which we are aware and is believed to be correct as of the date hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon the condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

## ENVIRONMENTAL PROTECTION

**Environmental Impact:** This material is not expected to present any environmental problems other than those associated with oil spills.

**Precautions if Material is Released or Spilled:** Eliminate all open flames in vicinity of spill or released vapor. Clean up spills as soon as possible, observing precautions in Special Protective Information and on product label. Absorb large spills with absorbent clay, diatomaceous earth or other suitable material. A fire or vapor hazard may exist since these cleanup materials will only absorb liquid; they will not absorb vapor.

**Waste Disposal Methods:** Place contaminated materials in disposable containers and bury in an approved dumping area.

### REACTIVITY DATA

**Stability (Thermal, Light, etc.):** Stable

**Incompatibility (Materials to Avoid):** May react with strong oxidizing materials.

**Hazardous Decomposition Products:** Normal combustion forms carbon dioxide and water vapor; incomplete combustion can produce carbon monoxide.

**Hazardous Polymerization:** Will not occur.

### PHYSICAL PROPERTIES

**Solubility:** Miscible with hydrocarbon solvents; insoluble in water.

**Appearance (Color, odor, etc.):** Colorless liquid.

**Boiling Range:** 350-510°F

**Melting Point:** n/a

**Specific Gravity:** 0.81 @ 60/60°F

**Vapor Pressure:** 1 mm Hg @ 77°F

**Vapor Density (Air = 1):** 5.7

**Percent Volatile (Volume %):** 99+%

**Evaporation (Bu Ac = 1):** 0.03

**Molecular Weight:** 166 (Avg.)

**Viscosity:** 1.50 cSt @ 100°F

n/a = Not Applicable



# Material Information Bulletin

CHEVRON Pearl Kerosene

CMS 217105

## ADDITIONAL HEALTH DATA

Signs and symptoms of central nervous system depression may include one or more of the following: headache, dizziness, loss of appetite, weakness and loss of coordination. Affected persons usually experience complete recovery when removed from the exposure area.

Not expected to produce systemic toxicity by skin contact; the acute dermal LD<sub>50</sub> for rabbits was 19.6 g/kg.

**Note to Physician:** Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

## SPECIAL PRECAUTIONS

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL

Contains Petroleum Distillate

DO NOT USE OR STORE near flame, sparks, or hot surfaces. USE ONLY IN WELL VENTILATED AREA.

DO NOT weld, heat or drill container.

Replace cap or bung. Emptied container still contains hazardous or explosive vapor or liquid.

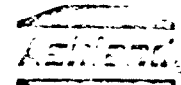
**CAUTION!** Do not use pressure to empty drum or explosion may result.

# MATERIAL SAFETY DATA SHEET

Ashland Chemical Company

DIVISION OF ASHLAND OIL INC.

P.O. BOX 2019, COLUMBUS, OHIO 43216 • (614) 472-3333



002172

METHYL ETHYL KETONE

PAGE 1

ACCEPTED BY O.S.H.A. AS ESSENTIALLY SIMILAR TO O.S.H.A. FORM 20

24-HOUR EMERGENCY TELEPHONE: 606-324-1133 (LOCATED AT ASHLAND, KENTUCKY)

ASHLAND PRODUCT NAME METHYL ETHYL KETONE

MILLHORN CHEMICAL  
P.O. BOX 460  
MAYWOOD,

CA 90270

05 50 033 6038800-  
DATA SHEET NO: 0000017-001  
LATEST REVISION DATE 02/78-78044  
PRODUCT: 3540000  
INVOICE: 925326  
INVOICE DATE 04/12/81  
TO: MILLHORN CHEMICAL  
6142 WALKER AVE.  
MAYWOOD, CA 90270  
(213) 77 90270

ATTN: PURCHASING/SAFETY DEPT

## SECTION I-PRODUCT IDENTIFICATION

GENERAL OR GENERIC ID: KETONE

HAZARD CLASSIFICATION: (03) FLAMMABLE LIQUID (173 115)

## SECTION II-HAZARDOUS COMPONENTS

INGREDIENT	PERCENT	PEL
METHYL ETHYL KETONE	>60 %	200 PPM

## SECTION III-PHYSICAL DATA

PROPERTY	REFINEMENT	MEASUREMENT
INITIAL BOILING POINT	FOR PRODUCT	175.00 DEG F ( 70.00 DEG C ) 2 760.00 MMHG
VAPOR PRESSURE	FOR PRODUCT	70.00 MMHG ( 68.00 DEG F ) ( 20.00 DEG C )
VAPOR DENSITY	AIR = 1	2.5
SPECIFIC GRAVITY		806 ( 68.00 DEG F ) ( 20.00 DEG C )
PERCENT VOLATILES		100.00 %
EVAPORATION RATE	(H2O AC=1 = 1)	5.2H

## SECTION IV-FIRE AND EXPLOSION DATA

FLASH POINT(CLOSED CUP) 20.00 DEG F  
( -6.66 DEG C )

LOWER EXPLOSIVE LIMIT 2.0 %

EXTINGUISHING MEDIA: ALCOHOL FOAM OR CARBON DIOXIDE OR DRY CHEMICAL

HAZARDOUS DECOMPOSITION PRODUCTS: MAY FORM TOXIC MATERIALS, CARBON DIOXIDE AND CARBON MONOXIDE, VARIOUS HYDROCARBONS, ETC

SPECIAL FIREFIGHTING PROCEDURES: SELF-CONTAINED BREATHING APPARATUS WITH A FULL FACEPIECE OPERATED IN PRESSURE-DEMAND OR OTHER POSITIVE PRESSURE MODE

UNUSUAL FIRE & EXPLOSION HAZARDS: VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

MATERIAL IS HIGHLY VOLATILE AND READILY GIVES OFF VAPORS WHICH MAY TRAVEL ALONG THE GROUND OR BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

## SECTION V-HEALTH HAZARD DATA

PERMISSIBLE EXPOSURE LEVEL 200 PPM

EFFECTS OF OVEREXPOSURE: FOR PRODUCT

EYES: CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING, BLURRED VISION

SKIN: PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFLATTING, DERMATITIS

BREATHING: EXCESSIVE INHALATION OF VAPOR CAN CAUSE NASAL AND RESPIRATORY IRRITATION, CIZZLING, WEAKNESS, FATIGUE, NAUSEA, HEADACHE, POSSIBLE UNCONSCIOUSNESS, AND EVEN ASPHYXIATION

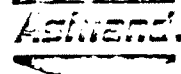
SWALLOWING: CAN CAUSE GASTROINTESTINAL IRRITATION, GASTRALY, VOMITING, DIARRHEA

**MATERIAL SAFETY  
DATA SHEET**

**Ashland Chemical Company**

DIVISION OF ASHLAND OIL INC.

P.O. BOX 2219, COLUMBUS, OHIO 43216 • (614) 992-3333



002172

METHYL ETHYL KETONE

PAGE 2

**SECTION V-HEALTH HAZARD DATA (CONTINUED)**

**FIRST AID**

IF ON SKIN THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. LAUNDRY CONTAMINATED CLOTHING BEFORE RE-USE.  
IF IN EYES FLUSH WITH LARGE AMOUNTS OF WATER, LIFTING UPPER AND LOWER LIDS OCCASIONALLY. GET MEDICAL ATTENTION.  
IF SWALLOWED GIVE TWO GLASSES OF WATER. INDUCE VOMITING IMMEDIATELY BY STICKING FINGER DOWN THROAT. CALL A PHYSICIAN. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.  
IF BREATHED IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION. KEEP PERSON WARM, QUIET AND GET MEDICAL ATTENTION.

**SECTION VI-REACTIVITY DATA**

HAZARDOUS POLYMERIZATION CANNOT OCCUR  
STABILITY STABLE

INCOMPATIBILITY AVOID CONTACT WITH STRONG OXIDIZING AGENTS

**SECTION VII-SPILL OR LEAK PROCEDURES**

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

SMALL SPILL ABSORB LIQUID ON PAPER, VERMICULITE, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND TRANSFER TO HOOD

LARGE SPILL ELIMINATE ALL IGNITION SOURCES (FLARES, FLAMES INCLUDING PILOT LIGHTS, ELECTRICAL SPARKS). PERSONS NOT WEARING PROTECTIVE EQUIPMENT SHOULD BE EXCLUDED FROM AREA OF SPILL UNTIL CLEAN-UP HAS BEEN COMPLETED. STOP SPILL AT SOURCE, DIKE AREA OF SPILL TO PREVENT SPREADING, PUMP LIQUID TO SALVAGE TANK. REMAINING LIQUID MAY BE TAKEN UP ON SAND, CLAY, EARTH, FLOOR ABSORBENT, OR OTHER ABSORBENT MATERIAL AND SHOVELED INTO CONTAINERS

**WASTE DISPOSAL METHOD:**

SMALL SPILL ALLOW VOLATILE PORTION TO EVAPORATE IN HOOD. ALLOW SUFFICIENT TIME FOR VAPORS TO COMPLETELY CLEAR HOOD DUCT WORK. DESTROY REMAINING MATERIAL BY BURNING IN AN IRON PAN

LARGE SPILL DESTROY BY LIQUID INCINERATION  
CONTAMINATED ABSORBENT MAY BE DEPOSITED IN A LANDFILL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS

**SECTION VIII-PROTECTIVE EQUIPMENT TO BE USED**

RESPIRATORY PROTECTION IF TLV OF THE PRODUCT OR ANY COMPONENT IS EXCEEDED, A NIOSH/MSHA LOGICALLY APPROVED AIR SUPPLIED RESPIRATOR IS ADVISED IN ABSENCE OF PROPER ENVIRONMENTAL CONTROL. OSHA REGULATIONS ALSO PERMIT OTHER NIOSH/MSHA RESPIRATORS UNDER SPECIFIED CONDITIONS. (SEE YOUR SAFETY EQUIPMENT SUPPLIER). ENGINEERING OR ADMINISTRATIVE CONTROLS SHOULD BE IMPLEMENTED TO REDUCE EXPOSURE

VENTILATION PROVIDE SUFFICIENT MECHANICAL (GENERAL AND/OR LOCAL EXHAUST) VENTILATION TO MAINTAIN EXPOSURE BELOW TLV(S)

PROTECTIVE GLOVES WEAR RESISTANT GLOVES SUCH AS, NATURAL RUBBER, NEOPRENE

EYE PROTECTION CHEMICAL SPLASH GOGGLES IN COMPLIANCE WITH OSHA REGULATIONS ARE ADVISED. HOWEVER, OSHA REGULATIONS ALSO PERMIT OTHER TYPE SAFETY GLASSES. (CONSULT YOUR SAFETY EQUIPMENT SUPPLIER)

OTHER PROTECTIVE EQUIPMENT TO PREVENT REPEATED OR PROLONGED SKIN CONTACT, WEAR IMPERVIOUS CLOTHING AND BOOTS.

**SECTION IX-SPECIAL PRECAUTIONS OR OTHER COMMENTS**

CONTAINERS OF THIS MATERIAL MAY BE HAZARDOUS WHEN EMPTIED. SINCE EMPTIED CONTAINERS RETAIN PRODUCT RESIDUES (VAPOR, LIQUID, AND/OR SOLID), ALL HAZARD PRECAUTIONS GIVEN IN THIS DATA SHEET MUST BE OBSERVED.

OVEREXPOSURE TO MATERIAL HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS. OVEREXPOSURE TO COMPONENTS HAS APPARENTLY BEEN FOUND TO CAUSE THE FOLLOWING EFFECTS IN LABORATORY ANIMALS: LIVER ABNORMALITIES, KIDNEY DAMAGE, LUNG DAMAGE, SPLEEN DAMAGE, BRAIN DAMAGE

THE INFORMATION ACCUMULATED HEREIN IS BELIEVED TO BE ACCURATE BUT IS NOT WARRANTED TO BE WHOEVER ORIGINATING WITH ASHLAND OR NOT. RECIPIENTS ARE ADVISED TO OBTAIN IN ADVANCE OF USE THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE TO THEIR CIRCUMSTANCES.

# MATERIAL SAFETY DATA SHEET

RECEIVED

JAN 06 1986

3M  
3M Center  
St. Paul, Minnesota 55144  
(612) 733-1110



Form 18893-C PWO

DUNS NO.: 00-617-3082

Chemical Family

Ans: .....

Trade Name

3M Brand Adhesive EC-750

3M I. D. Number 62-0750-9530-7

AC&S Division

## 1. INGREDIENTS

	CAS. #	%	TLV* (unit)
Methyl ethyl ketone (MEK)	78-93-3	38	200 ppm
Methyl isobutyl ketone (MIBK)	108-10-1	10	50 ppm
Asbestos (bound, not free fibers)		2	2 fibers/cc > 5u in length
Acrylonitrile/butadiene elastomer, mixed			
glycerol esters of abietic acid, terpene resin,			8 HR. Limit
clay filler, tributoxymethyl phosphate, salicylic			working limit
acid, antioxidant and zinc oxide		50	

## 2. PHYSICAL DATA

Boiling Point	MEK	175° F.	Solubility in Water	Slight
Vapor Pressure	@ 68° F.	80	Specific Gravity (H <sub>2</sub> O=1)	0.98
Vapor Density (Air = 1)		<3	Percent Volatile	~48
Evaporation Rate (ether = 1)		~3	pH	N.A.

Appearance and Odor Brown syrup--ketone odor

## 3. FIRE AND EXPLOSION HAZARD DATA

Flash Point (Test Method)	20° F. (C.C.)	Flammable Limits:	LEL = 1.4	UEL = 11.5
Extinguishing Media	CO <sub>2</sub> , foam, dry chemical			
Special Fire Fighting Procedures	None			
Unusual Fire and Explosion Hazards	None			

## 4. ENVIRONMENTAL INFORMATION

### Spill Response

Extinguish ignition sources. Collect spilled material and place in closed metal container.

### Recommended Disposal

Contains heavy metals and solvents. Flash point is less than 140°F. (60°C). Send to hazardous waste management facility. Recommended disposal is in a secure landfill or by incineration. Contact your state agency or the appropriate EPA regional solid waste office for the location of such permitted facilities. Discarded and off-specification product has an EPA Hazardous Waste Number of D-001.

TRADE NAME: JM Brand Adhesive EC-750

## 5. HEALTH HAZARD DATA

### Eye Contact

Liquid and vapors irritating to the eyes.

### Skin Contact

Prolonged skin contact may defat skin leading to irritation and dermatitis.

### Inhalation

Concentrated vapors may cause dizziness, headache, nausea and lack of coordination.

### Ingestion

May produce gastrointestinal irritation and nausea.

### Suggested First Aid

Eye contact: Immediately flush eyes with plenty of water for 10 minutes and call a physician.

Skin contact: Wash with soap and water.

Inhalation: Provide fresh air.

Ingestion: Call a physician.

## 6. REACTIVITY DATA

### STABILITY

☐ Unstable  
☒ Stable

Conditions to Avoid

### INCOMPATIBILITY

Materials to Avoid

### HAZARDOUS POLYMERIZATION

☐ May Occur  
☒ May Not Occur

Conditions to Avoid

### Hazardous Decomposition Products

CO, CO<sub>2</sub>, and smoke particles

## 7. SPECIAL PROTECTION INFORMATION

### Eye Protection

Chemical goggles

### Skin Protection

Rubber gloves

### Ventilation

Local exhaust

### Respiratory and Special Protection

Organic vapor mask if ventilation is not adequate.

### Other Protection

## 8. PRECAUTIONARY INFORMATION

Keep away from heat, sparks and open flame. Use only in areas adequately ventilated to remove vapors and prevent vapor buildup. Avoid eye contact. Avoid prolonged breathing of vapors and prolonged or repeated skin contact. Keep container closed when not in use.

## 9. DEPARTMENT OF TRANSPORTATION

### Proper Shipping Name

FLAMMABLE LIQUID, NOS

### DOT Hazard Class

FLAMMABLE LIQUID

### Issue Date

Nov. 1980

### Supersedes

Oct. 1979

The information on this Data Sheet represents our current data and best opinion as to the proper use in handling of this product under normal conditions. Any use of the product which is not in conformance with this Data Sheet or which involves using the product in combination with any other product or any process is the responsibility of the user.

**Shell**

97002 1-831




MSDS N

ER

5,120-5

PAG 3

SECTION I		NAME
PRODUCT	Isopropyl Alcohol	
CHEMICAL/ SYNONYMS	IPA, Isopropanol, Propanol-2	
CHEMICAL FAMILY	Alcohol	
SHELL CODE	31105	C.A.S. NUMBER 67-63-0

24 HOUR EMERGENCY ASSIST	
SHELL 713-473-9461	 HEAL  FIRE  REACT
CHEMTREC 800-424-9300	
HAZARD RATING	
LEAST 0	SLIGHT 1
MODERATE 2	HIGH 3
	EXTREME 4

SECTION II	INGREDIENTS	
	COMPOSITION	%
	Isopropyl Alcohol	100
		TOXICITY DATA
		Oral LD <sub>50</sub> (rat) = 5.8g/kg
		Dermal LD <sub>50</sub> (rabbit) = 16.4m
		Inhalation LC <sub>50</sub> (rat) = 12,000ppm (8 hrs.)

SECTION III	HEALTH INFORMATION
Symptoms of overexposure include such affects as headache, dizziness, nausea, incoordination, drowsiness and loss of consciousness.	
<u>Eye Contact:</u> Liquid or vapor contact can cause irritation.	
<u>Skin Contact:</u> Prolonged and repeated contact can cause dryness and irritation.	
<u>Inhalation:</u> High concentrations of vapor can irritate respiratory tract and may cause bronchopneumonia or pulmonary edema.	
<u>Ingestion:</u> May cause marked and persistent nausea, vomiting and abdominal pain. If vomiting occurs following ingestion, aspiration (breathing) vomitus into the lungs can cause bronchopneumonia or pulmonary edema.	
<div style="text-align: right;">T. "LEE" SAWYER, INC. JOBBER SHELL OIL &amp; SHELL CHEMICAL PRODUCTS 14117 Aetna St., Van Nuys, CA 786-8180 Box 369, Van Nuys, CA 91408</div>	

SECTION IV	OCCUPATIONAL EXPOSURE LIMITS
OSHA-PEL/TWA = 400ppm	
ACGIH-TLV/TWA = 400ppm	
-TLV/STEL = 500ppm	

**SECTION V****EMERGENCY AND FIRST AID PROCEDURES**

**EYE CONTACT:** Flush with water for 15 minutes while holding eyelids open. Get medical attention.

**SKIN CONTACT:** Wash with soap and water. Remove contaminated clothing and shoes; do not reuse until cleaned. If persistent irritation occurs, get medical attention.

**INHALATION:** Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

**INGESTION:** Do not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 30cc (2 tablespoons) Syrup of Ipecac. If Ipecac is unavailable, give 2 glasses of water and induce vomiting by touching finger to back of victim's throat. Keep victim's head below hips while vomiting. Get medical attention.

**SECTION VI****PHYSICAL DATA**

BOILING POINT (°F) ▶ 180	MELTING POINT (°F) ▶ -127	VAPOR PRESSURE (mmHg) ▶ 33@68°F
SPECIFIC GRAVITY (H <sub>2</sub> O=1) ▶ 0.79	% VOLATILE BY VOLUME ▶ 100	VAPOR DENSITY (AIR=1) ▶ 2.1
SOLUBILITY IN WATER ▶ Complete	EVAPORATION RATE (BUTYL ACETATE=1) ▶ 1.4	
APPEARANCE AND ODOR Colorless, mobile liquid. Mild odor.		

**SECTION VII****FIRE AND EXPLOSION HAZARDS**

FLASH POINT AND METHOD USED 53°F (TCC)	FLAMMABLE LIMITS/% VOLUME IN AIR LOWER 2	UPPER 12
EXTINGUISHING MEDIA Use water fog, "alcohol" foam, dry chemical or CO <sub>2</sub> .		
SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS Evacuate hazard area of unprotected personnel. Wear proper protective clothing including a MIOOSH approved self-contained breathing apparatus. Cool fire-exposed containers with water.  In the case of large fires, also cool surrounding equipment and structures with water.		
UNUSUAL FIRE AND EXPLOSION HAZARDS --		

SECTION VIII		REACTIVITY	
STABILITY ► <input type="checkbox"/> UNSTABLE <input checked="" type="checkbox"/> STABLE	HAZARDOUS POLYMERIZATION ► <input type="checkbox"/> MAY OCCUR <input checked="" type="checkbox"/> WILL NOT		
<b>CONDITIONS AND MATERIALS TO AVOID</b> Avoid heat, sparks, open flames and contact with strong oxidizing agents.  Will attack aluminum if the surface oxide film is penetrated (e.g. by abrasion or high temperature).			
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b> Carbon monoxide and unidentified organic compounds may be formed during combustion.			

SECTION IX	EMPLOYEE PROTECTION
<b>RESPIRATORY PROTECTION</b> If exposure may or does exceed occupational exposure limits (Sec. IV) use a NIOSH-approved respirator to prevent overexposure. In accord with 29 CFR 1910.134 use either a full-face, atmosphere-supplying respirator or an air-purifying respirator for organic vapors.	
<b>PROTECTIVE CLOTHING</b> Wear impervious gloves and other protective clothing as required to prevent skin contact. Wear chemical goggles to prevent eye contact.	
<b>ADDITIONAL PROTECTIVE MEASURES</b> Use explosion-proof ventilation as required to control vapor concentrations.	

SECTION X	ENVIRONMENTAL PROTECTION
<b>SPILL OR LEAK PROCEDURES</b> <b>WARNING.</b> Flammable. Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking. <u>Large spills:</u> Evacuate the hazard area of unprotected personnel. Wear appropriate respirator and protective clothing. Shut off source of leak only if safe to do so. Dike and contain. If vapor cloud forms, water may be used to suppress; contain run-off. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking container for proper disposal. Flush area with water to remove trace residue; dispose of flush solutions as above. <u>Small spills:</u> take up with an absorbent material and place in non-leaking containers; seal tightly for proper disposal.	
<b>WASTE DISPOSAL</b> Place in a disposal facility approved under RCRA regulations for hazardous waste (See Sec. XIII). Use non-leaking containers, seal tightly and label properly.	
<b>ENVIRONMENTAL HAZARDS</b> --	



## SECTION XI

## SPECIAL PRECAUTIONS

WARNING. Flammable liquid.

Keep away from heat, sparks and open flames. Keep containers tightly closed. Store away from strong oxidizing agents in a cool, dry place with adequate explosion-proof ventilation. Ground equipment to prevent accumulation of static charge. If pouring or transferring materials, containers must be bonded and grounded.

Do NOT weld, heat or drill on or near container; even emptied containers can contain explosive vapors.

Aluminum containers are not recommended for storage.

Minimize skin contact. Wash with soap and water before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse.

## SECTION XII

## TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION	<input checked="" type="checkbox"/> FLAMMABLE LIQUID	<input type="checkbox"/> COMBUSTIBLE LIQUID	<input type="checkbox"/> OXIDIZING MATERIAL	<input type="checkbox"/> NON-FLAMMABLE GAS
	<input type="checkbox"/> FLAMMABLE SOLID	<input type="checkbox"/> POISON, CLASS A	<input type="checkbox"/> CORROSIVE MATERIAL	<input type="checkbox"/> NOT HAZARDOUS BY D.O.T. REGULATIONS
	<input type="checkbox"/> FLAMMABLE GAS	<input type="checkbox"/> POISON, CLASS B	<input type="checkbox"/> IRRITATING MATERIAL	<input type="checkbox"/> OTHER-Specify below

D.O.T. PROPER SHIPPING NAME

Isopropanol

OTHER REQUIREMENTS

D.O.T. Identification Number = UN1219. Guide Sheet 26.

## SECTION XIII

## OTHER REGULATORY CONTROLS

EPA, FDA, OSHA, USDA, CPSC, etc.

EPA - Resource Conservation and Recovery Act (RCRA) Regulations  
As produced, this material is a product and not a waste. If discarded or intended to be discarded as is, it is an ignitable hazardous waste as defined in RCRA (40 CFR 261.21). The EPA hazardous waste number is D001.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to

vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

**BE SAFE**

READ OUR PRODUCT  
SAFETY INFORMATION  
... AND  
PASS IT ON

(PRODUCT LIABILITY LAW  
REQUIRES IT)

*John P. Lepore*  
Manager

SHELL OIL COMPANY  
PRODUCT SAFETY AND COMPLIANCE  
OIL AND CHEMICAL PRODUCTS  
P.O. BOX 4320  
HOUSTON, TEXAS 77210

DATE PREPARED




June 17, 1982

# MATERIAL SAFETY DATA SHEET

MSDS NUMBER ► 214-B

PAGE 1 OF 4

97002 (REV 1-83)

SECTION I		NAME		24 HOUR EMERGENCY ASSISTANCE	
PRODUCT	►	LACQUER THINNER		713-473-9461	 HEALTH 2  FIRE 3  REACTIVITY 0
CHEMICAL/ SYNONYMS	►	THINNER		CHEMTREC 800-424-9300	
CHEMICAL FAMILY	►	BLEND		HAZARD RATING	
CODE	►	214	C.A.S. NUMBER	►	LEAST 0 MODERATE 2 SLIGHT 1 HIGH 3 EXTREME 4

SECTION II		INGREDIENTS	
COMPOSITION	%	TOXICITY DATA	
TOLUENE	22.5	Oral LD <sub>50</sub> (rat) ~ 3 g/kg	
KETONES	50	Dermal LD <sub>50</sub> (rbt) = 4 g/kg	
PETROLEUM HYDROCARBONS	22.5	Inh LC <sub>50</sub> (rat) = 72000 ppm	
GLYCOL ETHERS	5	(4 hr)	

**SECTION III HEALTH INFORMATION**

**Acute Toxicity:** Overexposure can lead to central nervous system depression producing such effects as headache, dizziness, nausea, and loss of consciousness.

**Eye Contact:** Short-term liquid or vapor contact may result in slight eye irritation. Prolonged and repeated contact may be more irritating.

**Skin Contact:** Prolonged and repeated liquid contact can cause defatting and drying of the skin which may result in skin irritation and dermatitis.

**Inhalation:** High concentrations or prolonged exposure to lower concentrations may be slightly irritating to mucous membranes. Irritating to Nose & Throat. Overexposure can cause headache, nausea, vomiting and drowsiness.

**Ingestion:** Liquid ingestion may result in vomiting; aspiration (breathing) of vomitus into the lungs must be avoided as even small quantities in the lungs may result in chemical pneumonitis and pulmonary edema/hemorrhage.

**NOTE:** Minor embryotoxic/fetotoxic effects have been observed in laboratory rats exposed for most of the gestation period by the inhalation route.

SECTION IV		OCCUPATIONAL EXPOSURE LIMITS	
ACGIH-TLV/TWA = 160 ppm	(skin)		
-TLV/STEL = 210 ppm	(skin)		
OSHA-PEL/TWA = 125 ppm			
-PEL/Ceiling = 80 ppm			

2-015

# MATERIAL SAFETY DATA SHEET

MS NUMBER

97003 (11-81)

PAGE 2 OF 4

## SECTION V EMERGENCY AND FIRST AID PROCEDURES

**EYE CONTACT:** Flush with water for 15 minutes while holding eyelids open. Get medical attention.

**SKIN CONTACT:** Flush with water while removing contaminated clothing and shoes. Follow by washing with soap and water. Do not reuse clothing or shoes until cleaned. If irritation persists, get medical attention.

**INHALATION:** Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

**INGESTION:** Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.\*

\*NOTE TO THE PHYSICIAN: If more than 2.0 ml per kg has been ingested and vomiting has not occurred, emesis should be induced with supervision. Keep victim's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

## SECTION VI PHYSICAL DATA

BOILING POINT (°F) ▶ 235-242	MELTING POINT (°F) ▶ --	VAPOR PRESSURE (mmHg) ▶ 40-45
SPECIFIC GRAVITY (H <sub>2</sub> O=1) ▶ .83-.835	% VOLATILE BY VOLUME ▶ 50	VAPOR DENSITY (AIR=1) ▶ 3.3
SOLUBILITY IN WATER ▶ Negligible	EVAPORATION RATE (BUTYL ACETATE=1) ▶ 2.37	
APPEARANCE AND ODOR		
Colorless, mobile liquid. Aromatic, pungent odor.		

## SECTION VII FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD USED	FLAMMABLE LIMITS/% VOLUME IN AIR	LOWER	UPPER
55.5°F (TCC)			
EXTINGUISHING MEDIA			
Use water fog, foam, dry chemical or CO <sub>2</sub> . Do not use a direct stream of water. Product will float and can be reignited on surface of water.			
SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS			
Evacuate hazard area of unprotected personnel. Wear proper protective clothing including a NIOSH approved self-contained breathing apparatus. Cool fire-exposed containers with water.			
In the case of large fires, also cool surrounding equipment and structures with water.			
UNUSUAL FIRE AND EXPLOSION HAZARDS			
--			

# MATERIAL SAFETY DATA SHEET

97004 (10-79)

DS NUMBER ▶

PAGE 3 OF 4

**SECTION VIII****REACTIVITY**STABILITY ▶ ☐ UNSTABLE ☒ STABLEHAZARDOUS POLYMERIZATION ▶ ☐ MAY OCCUR ☒ WILL NOT OCCUR**CONDITIONS AND MATERIALS TO AVOID**

Avoid heat, sparks, open flames and contact with strong oxidizing agents. Will attack aluminum if the surface oxide film is penetrated which can result in the release of hydrogen gas.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Carbon monoxide and unidentified organic compounds may be formed during combustion.

**SECTION IX****EMPLOYEE PROTECTION****RESPIRATORY PROTECTION**

Use a NIOSH-approved respirator as required to prevent overexposure. In accord with 29 CFR 1910.134, use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

**PROTECTIVE CLOTHING**

Wear impervious gloves and protective clothing as required to prevent skin contact. Wear chemical goggles to prevent eye contact.

**ADDITIONAL PROTECTIVE MEASURES**

Use explosion-proof ventilation as required to control vapor concentrations.

**SECTION X****ENVIRONMENTAL PROTECTION****SPILL OR LEAK PROCEDURES**

**WARNING.** Flammable. Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking.

**Large spills:** Evacuate the hazard area of unprotected personnel. Wear appropriate respirator and protective clothing. Shut off source of leak only if safe to do so. Dike and contain. If vapor cloud forms, water fog may be used to suppress; contain run-off. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material; place in non-leaking containers for proper disposal. Flush area with water to remove trace residue; dispose of flush solutions as above.

**Small spills:** take up with an absorbent material and place in non-leaking containers; seal tightly for proper disposal.

**WASTE DISPOSAL**

Place in a disposal facility approved under RCRA regulations for hazardous waste (See Sec. XIII). Use non-leaking containers, seal tightly and label properly.

**ENVIRONMENTAL HAZARDS**

This product is designated as a hazardous substance under the Clean Water Act. KEEP OUT OF SURFACE WATERS OR SEWERS ENTERING OR LEADING TO SURFACE WATERS. (See Section XIII).

# MATERIAL SAFETY DATA SHEET

MSL NUMBER ►

97005 (REV. 7-82)

PAGE 4 OF 4

**SECTION XI****SPECIAL PRECAUTIONS****WARNING.** Flammable Liquid.

Keep away from heat, sparks and open flames. Keep containers tightly closed. Store away from strong oxidizing agents in a cool, dry place with adequate explosion-proof ventilation. Ground equipment to prevent accumulation of static charge. If pouring or transferring materials, containers must be bonded and grounded.

Do NOT weld, heat or drill on or near container; even emptied containers can contain explosive vapors.

Minimize skin contact. Wash with soap and water before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse. Properly dispose of contaminated leather articles, including shoes, that cannot be decontaminated.

**SECTION XII****TRANSPORTATION REQUIREMENTS**

DEPARTMENT OF TRANSPORTATION CLASSIFICATION	<input checked="" type="checkbox"/> FLAMMABLE LIQUID	<input type="checkbox"/> COMBUSTIBLE LIQUID	<input type="checkbox"/> OXIDIZING MATERIAL	<input type="checkbox"/> NON-FLAMMABLE GAS
	<input type="checkbox"/> FLAMMABLE SOLID	<input type="checkbox"/> POISON, CLASS A	<input type="checkbox"/> CORROSIVE MATERIAL	<input type="checkbox"/> NOT HAZARDOUS BY D.O.T. REGULATIONS
	<input type="checkbox"/> FLAMMABLE GAS	<input type="checkbox"/> POISON, CLASS B	<input type="checkbox"/> IRRITATING MATERIAL	<input type="checkbox"/> OTHER—Specify below

D.O.T. PROPER SHIPPING NAME

LACQUER THINNER. PAINT RELATED MATERIAL

OTHER REQUIREMENTS

D.O.T. ID.# = NA1263. RQ Paint Related Material (1000 lb). Also see Sec. XIII, Clean Water Act.

**SECTION XIII****OTHER REGULATORY CONTROLS**

EPA, FDA, OSHA, USDA, CPSC, etc.

**EPA - Clean Water Act (CWA)**

This product is designated as a hazardous substance under Section 311 of the Clean Water Act. Spills entering (a) surface waters or (b) any water-courses or sewers entering/leading to surface waters MUST be reported immediately to the National Response Center, 800-424-8802. The reportable quantity for Lacquer Thinner is 1000 lb (145 gal).

**EPA - Resource Conservation and Recovery Act (RCRA) Regulations**

This product has been designated by the EPA (RCRA 40 CFR 261.33) as a hazardous waste if it is spilled, discarded or intended to be discarded as is.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

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DATE PREPARED

August 1, 1984

# MATERIAL SAFETY DATA SHEET

SECTION I		
Manufacturer's Name	MCB Manufacturing Chemists	Emergency Telephone No. 513-631-0445
Address	2909 Highland Avenue, Norwood, Ohio 45212	
Chemical Name and Synonyms	Sulfuric Acid	Trade Name and Synonyms Oleum
Chemical Family	Acid	Formula $H_2SO_4$

SECTION II. HAZARDOUS INGREDIENTS					
PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
Pigments			Base Metal		
Catalyst			Alloys		
Vehicle			Metallic Coatings		
Solvents			Filler Metal		
Additives			Plus Coating or Core Flux		
Others			Others		
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III. PHYSICAL DATA			
Boiling Point (°F.)	Fp	37°F	Specific Gravity ( $H_2O=1$ ) 1.8438
Vapor Pressure (mm Hg.)			Percent Volatile By Volume (%)
Vapor Density (Air=1)			Evaporation Rate (_____ = 1)
Solubility in Water			
Appearance and Odor Colorless liquid.			

SECTION IV. FIRE AND EXPLOSION HAZARD DATA			
Flash Point (Method Used)	Not	Flammable Limits	Lel Uel
Extinguishing Media			
Special Fire Fighting Procedures			
Unusual Fire and Explosion Hazards			
Emits toxic $SO_2$ fumes when heated. Forms corrosive liquid from the gas.			

Pkg. Dim. (OD):

Gross Wgt.:

SECTION V HEALTH HAZARD DATA	
Threshold Limit Value	1 mg/M <sup>3</sup>
Effects of Overexposure	Causes severe burns to skin.
Emergency and First Aid Procedures	Flush immediately with water. Call doctor.
See MCA Chemical Safety Data Sheet SD-20.*	

SECTION VI REACTIVITY DATA			
Stability	Unstable		Conditions to Avoid
	Stable	X	
Incompatibility (Materials to avoid)		Contact with metals.	
Hazardous Decomposition Products			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will not Occur	X	

SECTION VII SPILL OR LEAK PROCEDURES	
Steps to be Taken in Case Material is Released or Spilled	Wash area with water.
Waste Disposal Method	Neutralize with alkali and flush with water.

SECTION VIII SPECIAL PROTECTION INFORMATION		
Respiratory Protection (Specify type)		
Ventilation	Local Exhaust	Special
	Mechanical (General)	Other
Protective Gloves	rubber	Eye Protection
Other Protective Equipment	rubber lab apron	goggles

SECTION IX SPECIAL PRECAUTIONS	
Precautions to be Taken in Handling and Storing	Corrosive liquid, White label
IATA, ICC.	
Other Precautions	

\*SD-20 can be obtained from the Manufacturing Chemists Association  
 1825 Connecticut Avenue, N. W.  
 Washington, D. C. 20009

**U.S. DEPARTMENT OF LABOR**  
Occupational Safety and Health Administration

Form Approved  
OMB No. 44-R1387

# MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,  
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

## SECTION I

<b>MANUFACTURER'S NAME</b> GPS Industries		<b>EMERGENCY TELEPHONE NO.</b> (213) 337-1255
<b>ADDRESS (Number, Street, City, State, and ZIP Code)</b> 13280 Amar Rd., Industry, CA 91746		
<b>CHEMICAL NAME AND SYNONYMS</b> Muriatic (Hydrochloric) Acid		<b>TRADE NAME AND SYNONYMS</b> Muriatic Acid
<b>CHEMICAL FAMILY</b>	<b>FORMULA</b> HCl	

## SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
<b>HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES</b>				<b>%</b>	<b>TLV (Units)</b>

## SECTION III - PHYSICAL DATA

<b>BOILING POINT (°F.)</b> 20.2° Be Mix	230°	<b>SPECIFIC GRAVITY (H<sub>2</sub>O=1)</b> 20.0°	1.160
<b>VAPOR PRESSURE (mm Hg.)</b> 230°F	760mm	<b>PERCENT. VOLATILE BY VOLUME (%)</b>	100%
<b>VAPOR DENSITY (AIR=1)</b>		<b>EVAPORATION RATE</b> (_____ =1)	
<b>SOLUBILITY IN WATER</b>	Infinite		
<b>APPEARANCE AND ODOR</b> Clear, colorless to faint yellow, liquid with pungent odor			

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

<b>FLASH POINT (Method used)</b> none	<b>FLAMMABLE LIMITS</b>	<b>LM</b>	<b>UM</b>
<b>EXTINGUISHING MEDIA</b>			
<b>SPECIAL FIRE FIGHTING PROCEDURES</b>			
<b>UNUSUAL FIRE AND EXPLOSION HAZARDS</b> Reacts upon contact with metals to produce hydrogen which may form explosive mixtures with air.			



## SECTION V - HEALTH HAZARD DATA

## THRESHOLD LIMIT VALUE

(Ceiling) - 5 ppm; 7 milligrams per cubic meter of air

## EFFECTS OF OVEREXPOSURE

Irritant to skin, eyes and mucous membranes of respiratory and gastrointestinal tract.

## EMERGENCY AND FIRST AID PROCEDURES

Speed in removal of hydrochloric acid is important.

EYES: Flush with large amount of water. SKIN: Flush thoroughly with water, removing contaminated clothing. INHALATION: Remove to fresh air; administer oxygen as required.

INGESTION: Dilute by drinking water, lime water or milk of magnesia. Do not use sodium bicarbonate. Do not induce vomiting, although spontaneous vomiting may occur. Get medical attention for all over-exposures. Do not apply oils or ointments unless directed to do so by a physician.

## SECTION VI - REACTIVITY DATA

## STABILITY

UNSTABLE

## CONDITIONS TO AVOID

STABLE

## INCOMPATIBILITY (Materials to avoid)

Contact with metals releases hydrogen; contact with sulfides releases poisonous, flammable  $H_2$ .

## HAZARDOUS DECOMPOSITION PRODUCTS

Hydrogen Chloride

HAZARDOUS  
POLYMERIZATION

MAY OCCUR

WILL NOT OCCUR

## CONDITIONS TO AVOID

Store separately from other chemicals, especially oxidizing agents, nitric acid, chlorates, sulfides and cyanides.

## SECTION VII - SPILL OR LEAK PROCEDURES

## STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Neutralize with soda ash or lime and flush with water; or flush to holding pond for pH adjustment before discharge to sewer; or add caustic directly to sewer to protect sewer system piping.

## WASTE DISPOSAL METHOD

Neutralize with soda ash, limestone, lime or caustic before discharging to stream or to sewer system.

## SECTION VIII - SPECIAL PROTECTION INFORMATION

## RESPIRATORY PROTECTION (Specify type)

Acid gas type canister; for emergencies, self-contained breathing apparatus.

## VENTILATION

LOCAL EXHAUST

SPECIAL

MECHANICAL (General)

OTHER

## PROTECTIVE GLOVES

Rubber, neoprene or vinyl

## EYE PROTECTION

Chemical safety goggles; plus face shield where appropriate.

## OTHER PROTECTIVE EQUIPMENT

Woolen outer clothing, rubber shoes or boots, rubber aprons for splash protection.

## SECTION IX - SPECIAL PRECAUTIONS

## PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Store in cool, well-ventilated or open, area separate from oxidizing agents, nitric acid, chlorates, sulfides, etc. Rubber-lined steel, Haveg, glass and ceramic ware used for handling hydrochloric acid.

## OTHER PRECAUTIONS



# MATERIAL SAFETY DATA SHEET

1038

MANUFACTURED PRODUCTS DIVISION

Approved by U. S. Department of Labor Essentially Similar to Form OSHA-20

SUPPLIER	Chemtech Industries, Inc.		Phone: 800-325-3332 or 314-966-9900
ADDRESS	9909 Clayton Road, St. Louis, MO 63124		
CHEMICAL NAME AND SYNONYMS	Hydrofluoric Acid 70% Solution	TRADE NAME	Hydrofluoric Acid Solution
CHEMICAL FAMILY	Inorganic Acid	FORMULA	HF

## I. PHYSICAL DATA

BOILING RANGE	152°F	API GRAVITY	na
SPECIFIC GRAVITY (Water=1)	1.26	POUNDS/GAL	10.5
VAPOR PRESSURE (mm of Hg) at 20°C	130	VAPOR DENSITY (Air=1)	1.0
SOLUBILITY IN WATER	complete	SOLUBILITY IN ACID (85% H <sub>2</sub> SO <sub>4</sub> )	complete
EVAPORATION RATE (Ether=1)	less than 1	PER CENT VOLATILE BY VOLUME	~40%
APPEARANCE	clear, colorless liquid	ODOR	penetrating odor
KAURI BUTANOL SOLVENCY	na	ODOR	na

## II. HAZARDOUS INGREDIENTS

MATERIAL	VOLUME PER CENT	TLV (Units)

## III. FIRE AND EXPLOSION HAZARD DATA

LOWER FLAMMABLE LIMIT IN AIR (Per Cent by Volume)	na	D.O.T. CLASSIFICATION	corrosive
FLASH POINT (Test Method)	na	FLAMMABILITY CLASSIFICATION	none
EXTINGUISHING MEDIA	na		
SMALL FIRE FIGHTING PROCEDURES	non-combustible but difficult to contain because it corrodes most substances.		
UNUSUAL FIRE AND EXPLOSION HAZARDS	May generate hydrogen gas in contact with some metals. Vapors are extremely corrosive.		

## . HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	3ppm (vapor)
EFFECTS OF EXPOSURE	Causes severe burns to eyes and skin which may not be immediately painful or visible. Excessive inhalation of vapors may cause pain behind the breastbone, cough, muscle spasms, shock, convulsions.
EMERGENCY AND FIRST AID PROCEDURES	In all cases of contact or overexposure to vapors: <u>Get Medical Attention.</u> <u>Skin:</u> Wash with soap and water (Washing with a 3% solution of aqueous ammonia will be beneficial. <u>Eyes:</u> Flush with water until medical attention is available. <u>Inhalation:</u> Remove to fresh air. <u>Ingestion:</u> Get medical attention.

## V. REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID		INCOMPATIBILITY (Materials to Avoid)	Corrodes most materials Store only in approved containers.
UNSTABLE	STABLE X				
HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID		HAZARDOUS DECOMPOSITION PRODUCTS	Hydrogen gas from contact with some metals.
MAY OCCUR	WILL NOT OCCUR X				

## VI. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Avoid breathing vapors. Avoid contact with skin, eyes or clothes. Wear protective equipment. Neutralize with soda ash. Flush with plenty of water applied quickly to entire spill area. Notify proper authorities.
WASTE DISPOSAL METHOD	Dispose of in accordance with local pollution regulations.

## VII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)		Self contained breathing device or air line.	
VENTILATION	LOCAL EXHAUST	Usually required to maintain below TLV.	Materials of construction must be corrosion resistant.
	MECHANICAL (General)		
PROTECTIVE GLOVES		Neoprene gloves	full face shield.
OTHER PROTECTIVE EQUIPMENT		Rubberized boots, hat, and acid resistant suit.	

PRECAUTIONARY LABELING	<b>DANGER!!! CORROSIVE!!!</b> Avoid contact with eyes or skin. Avoid breathing vapors. May cause serious burns which may not be immediately painful or visible. In case of contact, flush with large quantities of cold water -up to 3-4 hours or until medical attention is obtained. Remove and wash clothing before re-use. For eye contact, flush immediately with cold water; prompt medical attention is absolutely necessary.
---------------------------	---

OTHER HANDLING ALLOCATION PRECAUTIONS AND CONDITIONS	Containers should be stored in cool place with closure up. Avoid contact with oils or greases. Avoid direct sunlight. Do not store longer than necessary; containers may deteriorate under condition of prolonged storage.		
DATE	4/81	SIGNATURE OF PERSON RESPONSIBLE FOR DATA	J. L. Chollet

CHROMIC ACID - FLAKE OR GROUND

Slight Reactivity  
Hazard

1

Non-combustible

0

High Health  
Hazard

3

Ratings based on NIOSH Identification System for Occupationally Hazardous Materials (1974)

Soda Products Division  
Diamond Shamrock  
351 Phelps Court  
P.O. Box 2300  
Irving, Texas 75061  
Phone 214 659-7000

Diamond Shamrock

Material Safety

GENERAL INFORMATION

## Data Sheet

1505

## I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME

DIAMOND SHAMROCK CORPORATION

REGULAR TELEPHONE NO

EMERGENCY TELEPHONE NO

Contact Local Sales Office  
216 357-7070

ADDRESS

Divisional Technical Center, P.O. Box 191, Painesville, Ohio 44077

TRADE NAME

CHROMIC ACID - TECHNICAL - FLAKE OR GROUND

SYNONYMS

Chromic Trioxide, Chromic Anhydride,  $\text{CrO}_3$ 

## II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT

%

HAZARD DATA

Chromic Trioxide

100

PEL\* = 0.05 mg/m<sup>3</sup> (as Cr)

OSHA Permissible Exposure Limit (PEL)

## III PHYSICAL DATA

BOILING POINT 760 MM HG

N/A

MELTING POINT

387 °F

FREEZING POINT

N/A

SPECIFIC GRAVITY (H<sub>2</sub>O 1)

2.7 @ 20°C

VAPOR PRESSURE

N/A

VAPOR DENSITY (AIR 1)

N/A

SOLUBILITY IN H<sub>2</sub>O % BY WT

62%

VOLATILES BY VOL

N/A

EVAPORATION RATE (BUTYL ACETATE/1)

N/A

APPEARANCE AND ODOR

Solid, dark red flakes or powder; no odor

Density @ 20°C 40-80 Lbs/Cu. Ft.

D

0.2 - 2.0 depending on concentration

A regulated D O T Oxidizer

N/A Not Applicable

SP-MSI

All information, recommendations, and suggestions appearing herein concerning this product are based upon tests and data believed to be reliable; however, it is the responsibility to determine their safety, toxicity, and suitability for his particular use of the product. Any use of the product by others is beyond our control; no guarantee is made for the safety of the product when used in a manner not intended by the manufacturer. The user should consult the Material Safety Data Sheet for the product and follow the instructions for safe handling and use. The user should also consult the appropriate regulatory agencies for the latest information on the product.

# Data Sheet

## FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)		AUTOIGNITION TEMPERATURE	
N/A		N/A	
FLAMMABLE LIMITS IN AIR % BY VOL		LOWER	UPPER
N/A		N A	N A
EXTINGUISHING MEDIA			
CO <sub>2</sub> , dry chemical, or water			
SPECIAL FIRE FIGHTING PROCEDURES			
Under fire conditions, decomposing material may form a hot viscous foam.			
UNUSUAL FIRE AND EXPLOSION HAZARD			
Chromic acid is not combustible, but it may ignite oxidizable substances.			

## V HEALTH HAZARD INFORMATION

HEALTH HAZARD DATA		Oral LD <sub>50</sub> > 50 < 500 mg/kg (rat)	LC <sub>50</sub> > 0.395 mg/l air (rat)
		Dermal LD <sub>50</sub> > 20 < 200 mg/kg (rabbit)	
ROUTES OF EXPOSURE			
INHALATION			
Inhalation of dusts or mists may cause irritation of the nasal septum and respiratory tract. Prolonged or repeated exposure may cause ulceration and perforation of the nasal septum.			
SKIN CONTACT			
In case of contact, wash immediately with soap and water. Contact with broken skin may lead to formation of firmly margined "chrome sores".			
SKIN ABSORPTION			
Massive overexposure to solutions could lead to electrolyte imbalance, kidney failure, and death.			
EYE CONTACT			
Overexposure will cause extreme burns that may result in permanent damage to the eyes and even blindness. Exposure to low level concentrations may cause moderate irritation or conjunctivitis.			
INGESTION			
Can cause extreme tissue destruction and death as a result of electrolyte imbalance and kidney failure.			
EFFECTS OF OVEREXPOSURE			
ACUTE OVEREXPOSURE Causes extreme and rapid burns to eyes. Contact with broken skin may cause chrome sores. May cause severe irritation of nasal septum and respiratory tract.			
CHRONIC OVEREXPOSURE Prolonged or repeated eye contact may cause conjunctivitis. Prolonged or repeated skin contact, especially with broken skin, may cause "chrome sores", ulceration and perforation of the nasal septum may result from prolonged or repeated inhalation of chromic acid.			
EMERGENCY AND FIRST AID PROCEDURES			
EYES Object is to seek medical attention immediately. Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of entire eye surface. Washing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention immediately.			
SKIN			
Wash contaminated areas with plenty of soap and water. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. Seek medical attention immediately.			
INHALATION			
Get person out of contaminated area to fresh air. If breathing has stopped, artificial respiration should be started. Oxygen may be administered, if readily available. Irrigate nasal passages and mouth with salt water. Seek medical attention immediately.			
INGESTION			
If swallowed, Do Not Induce Vomiting. Give large quantities of water. If available, give several glasses of milk. Never give anything by mouth to an unconscious person. Cover eyes to exclude light. Seek Medical Attention Immediately.			

## NOTES TO PHYSICIAN

Massive dermal overexposure to solutions of chromic acid could lead to electrolyte imbalance, kidney failure, and death. Death has been avoided in several such cases through the use of early renal dialysis. Skin sores may be treated by removal from exposures, daily cleansing and debridement, and application of antibiotic cream and dressing to prevent further infection and contamination.

# Data Sheet

## VI REACTIVITY DATA

### CONDITIONS CONTRIBUTING TO INSTABILITY

Under normal use conditions, chromic acid is stable

### INCOMPATIBILITY

Chromic acid is a strong oxidizing agent, even in solution. Avoid contact with organic materials, oils, greases or any easily oxidizable material. Chromic acid is hygroscopic. Do not store in humid places

### HAZARDOUS DECOMPOSITION PRODUCTS

None

### CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

None

## VII SPILL OR LEAK PROCEDURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Leaks should be stopped. Solids should be cleaned up immediately with a shovel to remove as much material as possible. Remaining traces of material should be neutralized, then dampened with water. Dampened material should be covered with absorbent material. Place material in closed containers, label, and dispose of in approved chemical waste disposal area after treating waste material with appropriate waste disposal method (see below)

### NEUTRALIZING AGENTS

Reducing hexavalent chromium with sodium bisulfite, sodium sulfite, ferrous chloride, ferrous sulfate. Neutralize with sodium bicarbonate (soda ash) or lime

### WASTE DISPOSAL METHOD

Hexavalent chromium in solution may be reduced to trivalent chromium by reducing agents, such as sodium bisulfite, sodium sulfite, sulfur dioxide, or ferrous sulfate or chloride. The reduced chromium may then be precipitated as the chromic oxide by neutralizing to a pH of 7.5 with soda ash, caustic soda, or lime. The solid material may be disposed of via an approved chemical waste landfill. Dispose of in accordance with all Federal, state, and local health pollution requirements

## VIII INDUSTRIAL HYGIENE CONTROL MEASURES

### VENTILATION REQUIREMENTS

Good industrial hygiene practice dictates that the work area be provided with adequate local exhaust ventilation to maintain the air concentration of chromic trioxide below  $0.05 \text{ mg/m}^3$  (as Cr) as required by OSHA. The number of persons exposed should be minimized. A NIOSH-approved respirator for acid dusts, mists, or vapors must be used if exposure levels are above the PEL until exposures are controlled.

### SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

#### RESPIRATORY (SPECIFY IN DETAIL)

A NIOSH-approved respirator for acid dusts, mists, or vapors.

#### EYE

Chemical splash goggles.

#### GLOVES

Industrial grade rubber or plastic gloves

#### OTHER CLOTHING AND EQUIPMENT

Clean hard hats, rubber safety shoes or boots, and protective clothing should be worn when handling chromic trioxide. Protective clothing should be changed at least daily. Eye bath and safety shower should be provided in all areas in which chromic trioxide is stored and/or handled.

# Data Sheet

## SPECIAL PRECAUTIONS

### PRECAUTIONARY STATEMENTS

### OTHER HANDLING AND STORAGE REQUIREMENTS

Do not store in areas of high humidity.

Do not store in close proximity to combustible materials as chromic acid is an oxidizing agent (yellow label).

Store in tightly closed containers away from sources of heat.

### DEPARTMENT OF TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: Chromic Acid, Solid

HAZARD CLASS: Oxidizer NA1463

HAZARDOUS SUBSTANCE: RO 1,000 lbs or more in a single container

PREPARED BY

Diamond Shamrock Corporation  
Technical Service Group

DATE

February, 1981





# Data Sheet

## IV FIRE AND EXPLOSION DATA

<b>FLASH POINT (TEST METHOD)</b> None	<b>AUTOIGNITION TEMPERATURE</b> Nonflammable	
<b>FLAMMABLE LIMITS IN AIR, % BY VOL</b>	<b>LOWER</b> Nonflammable	<b>UPPER</b> Nonflammable
<b>EXTINGUISHING MEDIA</b> Use carbon dioxide, "alcohol" foam or dry chemicals in areas where caustic soda is stored. Caustic soda is nonflammable.		
<b>INITIAL FIRE FIGHTING PROCEDURES</b> Pressure-demand, self-contained respiratory protection and protective clothing should be worn by firefighters in areas where caustic soda is stored. Caustic soda is nonflammable.		
<b>INITIAL FIRE AND EXPLOSION HAZARD</b> None		

## V HEALTH HAZARD INFORMATION

<b>HAZARDOUS DATA</b> FEL 2.0 mg/m <sup>3</sup> Acute LC <sub>50</sub> > 0.018 < 0.20 mg/L Acute LD <sub>50</sub> 140-340 mg/kg (oral - rat) Acute LD <sub>50</sub> 1,350 mg/kg (dermal - rabbit)
<b>HAZARDOUS EFFECTS</b> Caustic soda is a corrosive material.
<b>IRRITATION</b> Airborne concentrations of dust, mist, or spray of caustic soda may cause damage to the respiratory tract and to the lung tissue proper which could produce chemical pneumonia, depending upon severity of exposure.
<b>SKIN CONTACT</b> Caustic soda is destructive to tissues contacted and produces severe burns.
<b>SKIN ABSORPTION</b> See "Skin Contact" above.
<b>EYE CONTACT</b> Caustic soda is destructive to eye tissues on contact. Will cause severe burns that result in damage to the eyes and even blindness.
<b>INGESTION</b> Caustic soda can cause severe burns and complete tissue perforation of mucous membranes of the mouth, throat, esophagus, and stomach if swallowed.
<b>EFFECTS OF OVEREXPOSURE</b> <b>ACUTE OVEREXPOSURE</b> Burns resulting in frequently deep ulceration and ultimate scarring.
<b>CHRONIC OVEREXPOSURE</b> The chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis. Similarly, inhalation of dust, spray, or mist may result in varying degrees of irritation or damage to the respiratory tract tissues and an increased susceptibility to respiratory illness.
<b>FIRST AID PROCEDURES</b> <b>EYES</b> Immediately flush eyes with large amounts of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. Flushing eyes within 1 minute is essential to achieve maximum effectiveness. Seek medical attention immediately.
<b>SKIN</b> Immediately wash contaminated skin with plenty of water. This may be followed with a rinse with vinegar or dilute acetic acid (3% solution) if available. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. Seek medical attention immediately.
<b>INHALATION</b> Get person out of contaminated area to fresh air. If breathing has stopped, artificial respiration should be started. Oxygen may be administered, if readily available. Seek medical attention immediately.
<b>INGESTION</b> If swallowed, DO NOT induce vomiting. Give large quantities of water. If available, give several glasses of milk. Never give anything by mouth to an unconscious person. Seek medical attention immediately.
<b>DO PHYSICIAN</b>

# Data Sheet

## VI REACTIVITY DATA

### CONDITIONS CONTRIBUTING TO INSTABILITY

Under normal use conditions, anhydrous caustic soda is stable.

### INCOMPATIBILITY

When handling caustic soda, avoid contact with aluminum, leather, wool, tin, zinc, and alloys containing these metals. Do not mix with strong acids without dilution and agitation to prevent violent or explosive reaction.

### HAZARDOUS DECOMPOSITION PRODUCTS

None

### CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

None

## VII SPILL OR LEAK PROCEDURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Stop leaks. Contain spill. Remove as much as possible (e.g., shovel up). Neutralize, removing traces of material with dilute acid then flush area with water followed by liberal covering of sodium bicarbonate. Reuse spilled material, if possible. Otherwise place in a closed, labeled, container and store in a safe place to await proper disposal. Persons performing this work should wear adequate personal protective equipment and clothing. **Caution:** Anhydrous caustic soda may react violently with acids and water.

### NEUTRALIZING CHEMICALS

Neutralize with any dilute inorganic acid such as hydrochloric, sulfuric, nitric, phosphoric, and acetic acid.

### WASTE DISPOSAL METHOD

Dispose in accordance with all federal, state and local regulations concerning health and pollution. Dispose via approved chemical waste disposal method, if regulations permit.

## VIII INDUSTRIAL HYGIENE CONTROL MEASURES

### VENTILATION REQUIREMENTS

Good industrial hygiene practice dictates that the work area should be isolated and contained, and provided with adequate local exhaust ventilation or other controls to maintain the air concentration of caustic soda below 2.0 mg/m<sup>3</sup> as required by OSHA. Air concentration of carbon monoxide formed by reaction of caustic soda and reducing sugars should not exceed 50 ppm for an eight (8) hour TWA.

### SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

#### RESPIRATORY (SPECIFY IN DETAIL)

Use NIOSH-approved respirator for dusts and mists. Use air purifying respirator where caustic soda is in contact with reducing sugars.

#### EYE

Chemical splash goggles and face shield should be worn when working with or around caustic soda.

#### GLOVES

Gloves coated with rubber, synthetic elastomers, PVC, or other plastic should be worn when handling caustic soda to minimize skin contact.

#### OTHER CLOTHING AND EQUIPMENT

Hard hats, safety shoes, and rubber boots should be worn along with rubber apron when handling caustic soda. Safety showers and eyewash stations should be provided in all areas in which caustic soda is handled.

# Data Sheet

## IX SPECIAL PRECAUTIONS

### RECAUTIONARY STATEMENTS

### DANGER!

#### Causes Severe Burns to Skin and Eyes

Do NOT get in eyes, on skin, on clothing.

Avoid breathing dust, mist, or spray.

Do NOT take internally.

Use with adequate ventilation and employ respiratory protection when exposed to dust, mist or spray.

When handling, wear chemical splash goggles, face shield, rubber gloves and protective clothing.

Wash thoroughly after handling.

Avoid contact with strong acids to prevent violent or explosive reactions.

Keep container closed.

Hazardous carbon monoxide gas can form upon contact with food and beverage products in enclosed spaces and can cause death. Follow appropriate tank entry procedures (ANSI Z117.1-1977).

#### First Aid:

##### In case of contact:

**Eyes:** Immediately flush with plenty of water for at least 15 minutes holding eyelids apart to ensure flushing of the entire eye surface. **Seek medical attention immediately.**

**Skin:** Immediately wash with plenty of water. If available, rinse with vinegar or dilute acetic acid (3% solution). Remove contaminated clothing and footwear. Wash clothing before reuse and discard footwear which cannot be decontaminated. **Seek medical attention immediately.**

**Inhalation:** Remove person from contaminated area to fresh air. If breathing has stopped, artificial respiration should be started. Oxygen may be administered if readily available. **Seek medical attention immediately.**

**Ingestion:** If swallowed, DO NOT induce vomiting. Give large quantities of water. If available, give several glasses of milk. **NEVER** give anything by mouth to an unconscious person. **Seek medical attention immediately.**

#### Special instructions for dissolving anhydrous caustic soda:

When making solution, **always** add slowly to liquid surface with constant stirring. **Never** add the liquid to the caustic soda.

Always start with lukewarm liquid (80°-100° F). **Never** start with hot or cold liquid.

If caustic soda becomes concentrated in one area, or if added too rapidly, or if added to hot or cold liquid, a rapid temperature increase can result in **DANGEROUS** boiling and/or spattering which may cause an immediate **VIOLENT ERUPTION**.

**Spill or Leak:** Leaks should be stopped. Spills, after containment, should be shoveled up and removed to chemical waste area or removed by vacuum truck, if liquid. Neutralize residue with dilute acid, flush spill area with water followed by liberal covering of sodium bicarbonate. Dispose of wash water according to Federal, State and Local regulations.

#### For Industrial Use Only

### OTHER HANDLING AND STORAGE REQUIREMENTS

Caustic soda is classified by D.O.T. as a corrosive material.

Considerable heat is generated when water is added to caustic soda; therefore, when making solutions **always** add the caustic soda to the water with constant stirring. The water should **always** be lukewarm (80°-100° F). **Never** start with hot or cold water. If caustic soda becomes concentrated in one area, or if added too rapidly, or if added to hot or cold water, a rapid temperature increase can result in **DANGEROUS BOILING** and/or spattering or may cause an immediate **VIOLENT ERUPTION**. Caustic soda can react violently or explosively with acids and many organic chemicals.

Caustic soda reacts with reducing sugars such as fructose, lactose, maltose, galactose, levulose and arabinose to form carbon monoxide. While the potential for worker exposure to carbon monoxide may be small, a potential does exist during cleaning of certain dairy and possibly other industry equipment.

Returnable containers **should** be shipped in accordance with supplier's recommendations. Return shipments should comply with all federal, state and DOT regulations. All residual caustic soda should be removed from containers prior to disposal.

More information on the hazards and handling of caustic soda appear in Diamond Shamrock Corporation's Caustic Soda Handbook EC-LDC-1c.

### DEPARTMENT OF TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: Caustic Soda, Dry

HAZARD CLASS: Corrosive Material

PREPARED BY:

Diamond Shamrock Corporation  
Technical Service Group

DATE:

July 1, 1978

# DU PONT

## MATERIAL SAFETY DATA SHEET

### IDENTIFICATION

**NAME**

Sodium Cyanide

**GRADE**Cyanobrik\*; Cyanogran\*;  
Compounders Grade**CHEMICAL FAMILY**

Alkali Metal Cyanide

**FORMULA** NaCN**SYNONYMS**

Cyanide of Sodium; Prussiate of Soda

**CAS REGISTRY NO.** 143-33-9**CAS NAME** Sodium Cyanide**PRODUCT INFORMATION PHONE**

(800) 441-9442

**I.D. NOS./CODES**

NIOSH Registry No. VZ7525000

**MEDICAL EMERGENCY PHONE**

(800) 441-3637

**MANUFACTURER/DISTRIBUTOR**

E. I. du Pont de Nemours &amp; Co. (Inc.)

**ADDRESS** Wilmington, DE 19898**TRANSPORTATION EMERGENCY PHONE**

Du Pont Cyanide HOTLINE

(For emergencies only)

(901) 357-1546

CHEMTREC (800) 424-9300

### PHYSICAL DATA

**BOILING POINT**, 760 mmHg

1496°C (2725°F)

**MELTING POINT**

564°C (1047°F)

**SPECIFIC GRAVITY** 1.6**VAPOR PRESSURE** Negligible**VAPOR DENSITY**

Not volatile

**SOLUBILITY IN H<sub>2</sub>O**

37% at 20°C (68°F)

**pH INFORMATION** 11.3 to 11.7(Typical for 5 to 25% solutions with  
no pH adjustment)**EVAPORATION RATE (BUTYL ACETATE=1)**

Not applicable

**FORM** Solid**APPEARANCE** Granular or Briquettes**COLOR** WhiteODOR None (but can have slight  
ammonia and/or HCN odor if damp)

\*Reg. U.S. Pat. & Tm Off., Du Pont Company. Cyanobrik® and Cyanogran® Sodium Cyanide are made only by Du Pont.

## HAZARDOUS COMPONENTS

MATERIAL(S)  
Sodium Cyanide

APPROXIMATE %  
100

## HAZARDOUS REACTIVITY

### INSTABILITY

Very stable when dry.

### INCOMPATIBILITY

Large amounts of highly toxic, flammable hydrogen cyanide (HCN) gas will be evolved from contact with acids. Reacts violently with strong oxidizing agents. Water or weak alkaline solution can produce dangerous amounts of HCN in confined areas.

### DECOMPOSITION

Moisture will cause slow decomposition, releasing poisonous HCN and ammonia gas.

### POLYMERIZATION

Will not occur.

## FIRE AND EXPLOSION DATA

FLASH POINT Will not burn.

FLAMMABLE LIMITS IN AIR, % BY VOL.

LOWER Not applicable.

AUTOIGNITION TEMPERATURE

UPPER Not applicable.

Not applicable.

### FIRE AND EXPLOSION HAZARDS

Will not burn. Sodium cyanide will not be destroyed in an ordinary fire involving combustible materials such as paper or wood.

### EXTINGUISHING MEDIA

Water on fires near sodium cyanide, but minimize amount of water if containers are opened or burned (see "Incompatibility", above) DO NOT use carbon dioxide (CO<sub>2</sub>) which reacts with sodium cyanide to produce hydrogen cyanide if moisture is present.

### SPECIAL FIRE FIGHTING INSTRUCTIONS

Sodium cyanide dissolves readily in water, therefore cyanide solution runoff may occur if containers are opened or burned. Runoff should be contained to avoid environmental or safety problems. Contained cyanide solution can be detoxified with hypochlorite.

## HEALTH HAZARD INFORMATION

### PRINCIPAL HEALTH HAZARDS (Including Significant Routes, Effects, Symptoms of Over-Exposure, and Medical Conditions Aggravated by Exposure)

May be fatal if inhaled, swallowed, or absorbed through skin. Contact with acids or weak alkalis liberates poisonous gas. Causes eye burns and may irritate skin.

Oral LD50: 6 mg/kg in rats

Toxic effects described in animals from exposure include asphyxia, dyspnea, ataxia, tremors, coma, and lethality by disrupting oxidative metabolism. Tests in bacterial and mammalian cell cultures demonstrate no mutagenic activity. Tests in some animals indicate that the compound may affect the fetus, that is, it may be a developmental toxin.

Human health effects of overexposure may initially include: skin irritation with discomfort or rash, eye irritation or burns with discomfort, tearing, or blurring of vision, and possible permanent eye damage; and nonspecific discomfort such as nausea, headache, dizziness, vomiting, and weakness. Higher exposures may lead to these effects: rapid respiration; lowered blood pressure; unconsciousness; convulsions; and fatality. Evidence suggests that significant skin permeation can occur. Individuals with preexisting diseases of the central nervous system may have increased susceptibility to the toxicity of excessive exposures.

### CARCINOGENICITY

Not listed as a carcinogen by IARC, NTP, OSHA, ACGIH, or Du Pont.

### EXPOSURE LIMITS (PEL (OSHA), TLV (ACGIH), AEL (DU PONT), ETC.)

The OSHA 8-hour Time Weighted Average (TWA) and ACGIH TLV®-TWA are 5 mg/m<sup>3</sup>, as CN. Both carry a "skin" notation indicating that cyanide may penetrate the skin (especially if the skin is broken). Control of vapor, dust, and mist inhalation alone may not be sufficient to prevent absorption of an excessive dose.

### SAFETY PRECAUTIONS

Do not breathe dust, mist, or HCN gas. Do not get in eyes. Avoid contact with skin and clothing. Do not carry foodstuffs, beverages, or tobacco where contamination with cyanide is possible. Wash thoroughly after handling. Wash contaminated clothing before reuse.

### FIRST AID AND MEDICAL TREATMENT

Actions to be taken in case of cyanide exposure should be planned and practiced before beginning work with cyanides. In most cases, cyanide poisoning causes a deceptively healthy pink to red skin color; however, if a physical injury or lack of oxygen is involved, the skin color may be bluish.

Treatment for cyanide poisoning can be provided in two ways, "First Aid" and "Medical Treatment". Both require immediate action to prevent further harm or death. First aid using amyl nitrite and oxygen is generally given by a layman before medical help arrives. Medical treatment involves

intravenous injections and must be administered by qualified medical personnel. Even if a doctor or nurse is present, the need for fast treatment dictates using first aid treatment with amyl nitrite and oxygen while medical treatment materials for intravenous injection are being prepared. Experience shows that first aid given promptly is usually the only treatment needed.

Medical treatment is given if the victim does not respond to first aid. It provides a larger quantity of antidote including sodium thiosulfate to chemically destroy cyanide in the body. However, even under optimum conditions, amyl nitrite can be administered faster and should be used even if medical treatment follows. Do not overreact. Fast treatment is needed, but a conscious person usually does not need treatment beyond oxygen. Amyl nitrite and medical treatment kits for cyanide poisoning are available, with doctor's prescription, from pharmacies.

#### A. First Aid - Directions for Giving Amyl Nitrite Antidote and Oxygen

1. Conscious:- For inhalation and/or absorption if the victim is alert, oxygen may be all that is needed. But if he is not fully conscious or shows signs of poisoning, follow paragraph A-2 below. For swallowing, see below paragraph C, "First Aid - Swallowing Cyanide".
2. Unconscious But Breathing: Break up amyl nitrite ampule in a cloth and hold lightly under the victim's nose for 15 seconds, then take away for 15 seconds. Repeat 5-6 times. If necessary, use a fresh ampule every 3 minutes until the victim regains consciousness (usually 1-4 ampules). Give oxygen to aid recovery. Where more severe poisoning has occurred, consider holding the amyl nitrite under the nose continuously for the first ampule or more.
3. Not Breathing:
  - a. Give artificial respiration, preferably with an oxygen resuscitator. Give amyl nitrite antidote by placing a broken ampule inside the resuscitator face piece, being careful that the ampule does not enter the victim's mouth and cause choking.
  - b. If using manual artificial respiration, give amyl nitrite antidote as in paragraph A-2 above except keep the first amyl nitrite ampule under the nose with replacement every 3 minutes.
4. Amyl Nitrite Notes:
  - a. Amyl nitrite is highly volatile and flammable; do not smoke or use around source of ignition.
  - b. If treating poison victim in a windy or drafty area, provide something - a rag, shirt, wall, drum, cupped hand, etc. - to prevent the amyl nitrite vapors from being blown away. Keep the ampule upwind from the nose. The objective is to get amyl nitrite into the victim's lungs.
  - c. Rescuers should avoid amyl nitrite inhalation so they won't become dizzy and lose competence.
  - d. Lay the victim down for treatment to maintain a good blood supply to the victim's head. Since amyl nitrite dilutes the blood vessels and lowers blood pressure, lying down will help prevent unconsciousness.

- e. Do not overuse; excessive use might put the victim in shock. This has not occurred in practice at Du Pont plants and we are not aware of any death or serious after effects from treatment with amyl nitrite. (See paragraph E, "Medical Treatment".)

B. First Aid - Inhalation of Cyanide - Carry the victim to fresh air. Lay victim down. Administer amyl nitrite antidote and oxygen (Paragraph A). Check for and remove contaminated clothing. Keep patient quiet and warm. Call a physician.

C. First Aid - Swallowing Cyanide

1. Conscious: Immediately give patient one pint of 1% sodium thiosulfate solution (or plain water) by mouth and induce vomiting with finger in throat. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Call a physician.
2. Unconscious: Follow first aid procedure as in paragraphs A-2 and A-3 (and/or medical treatment in paragraph E) and call a physician. If the victim revives, then proceed with paragraph C-1.

D. First Aid - Skin or Eye Contact (Skin Absorption)

1. Eye Contact: Immediately flush eyes with plenty of water, remove contaminated clothing, and keep victim quiet and warm. Call a physician.
2. Skin Contact: Wash skin to remove the cyanide while removing all contaminated clothing, including shoes. Do not delay. Skin absorption can occur from cyanide dust, solutions, or HCN vapor. Absorption is slower than inhalation, usually measured in minutes compared to seconds for inhalation.

Follow First Aid procedures in Paragraph A if treatment is needed, but even severe skin contact usually will not require treatment if 1) no inhalation or swallowing has occurred and 2) the cyanide is promptly washed from the skin and contaminated clothing and shoes are removed. If skin contact is prolonged, HCN poisoning may occur with nausea, unconsciousness, and then death possible if the source of cyanide intake is not removed and treatment provided. Even after washing the skin, the victim should be watched for at least 1 to 2 hours because absorbed cyanide can continue to work into the bloodstream. Wash clothing before reuse and destroy contaminated shoes.

E. Medical Treatment

Medical treatment is normally provided by a physician, but might be provided by a professionally trained "qualified medical person" where a need exists and where state and local laws permit.

While preparing for sodium nitrite and sodium thiosulfate injections, use amyl nitrite and oxygen as outlined in paragraph A. When ready and if the victim is not responding to first aid, first inject the solution



of sodium nitrite (10 mL of a 3% solution) intravenously at the rate of 2.5 mL/minute, then immediately inject the sodium thiosulfate (50 mL of a 25% solution) at the same rate, taking care to avoid extravasation.

This is a fairly lengthy treatment (24 minutes) since a total of 10 + 50, or 60 mL is injected at a rate of 2.5 mL/minute. Consideration should be given to the size and condition of the victim as treatment is proceeding. The above sodium nitrite injection is about one third of a lethal dose, so care should be taken to avoid excessive use. It is not essential that full quantities be given, just because treatment was started. Injections can be stopped at any point if recovery is evident.

Watch patient continuously for 24-48 hours if cyanide exposure was severe. If there is any return of symptoms during this period, repeat this treatment using one-half the amounts of sodium nitrite and sodium thiosulfate solutions. Caution should be used to avoid overuse of medical treatment chemicals as the prescribed dose is about 1/3 the lethal dose for an average individual.

If signs of excessive methemoglobinemia develop (i.e., blue skin and mucous membranes, vomiting, shock and coma), 1% methylene blue solution should be given intravenously. A total dose of 1 to 2 mg/kg of body weight should be administered over a period of five to ten minutes and should be repeated in one hour if necessary. In addition, oxygen inhalation will be helpful. Transfusion of whole fresh blood may be considered if there has been mechanical injury with external or internal bleeding and simultaneous cyanide exposure.

Du Pont's experience in treating cyanide poison cases is that first aid procedures using amyl nitrite and oxygen were effective and the only treatment needed in most cases. Medical treatment, using intravenous injections, was used in a few cases. Both procedures have been successful.

## PROTECTION INFORMATION

### GENERALLY APPLICABLE CONTROL MEASURES

Good general ventilation should be provided to keep dust, mist, and HCN gas below exposure limits.

### PERSONAL PROTECTIVE EQUIPMENT

~~Recommended~~ Minimum Protection - chemical splash goggles and rubber gloves (butyl or neoprene preferred).

Have available and use as appropriate: face shields; rubber suits, aprons, and boots; disposable toxic dust and mist respirators; self-contained breathing air supply (in case of emergency); HCN detector; first aid and medical treatment supplies\*, including oxygen resuscitators.

\*See Du Pont Sodium Cyanide Storage and Handling Bulletin for list of supplies.

## DISPOSAL INFORMATION

### **AQUATIC TOXICITY**

The compound is highly toxic (96-hour LC50 = 0.5 - 1 mg/L).

### **SPILL, LEAK OR RELEASE**

Sweep up and shovel into a covered container or plastic bag, pending transfer, to secure the spill. Cover and keep spillage dry. Flush spill area with a dilute solution of sodium or calcium hypochlorite. Comply with Federal, State, and local regulations on reporting releases.

### **WASTE DISPOSAL**

Comply with Federal, State, and local regulations. Do not flush cyanide into sewers which may contain an acid. Detoxify with sodium hypochlorite, or hydrogen peroxide; flush to waste water treatment system; or call a licensed disposal contractor.

## SHIPPING INFORMATION

### DOT (172.101)

#### **PROPER SHIPPING NAME**

Sodium Cyanide, Solid

#### **HAZARD CLASS**

Poison B

UN NO. 1689

DOT LABEL(S) Poison

### IMO (PAGE 6167)

#### **PROPER SHIPPING NAME**

Sodium Cyanide

HAZARD CLASS 6.1

UN NO. 1689

IMO LABEL(S) Poison

### DOT/IMO (172.102)

#### **PROPER SHIPPING NAME**

Sodium Cyanide

#### **HAZARD CLASS**

Poison B, 6.1

UN NO. 1689

### IATA/ICAO

#### **PROPER SHIPPING NAME**

Sodium Cyanide

HAZARD CLASS 6.1

UN NO. 1689

LABEL(S) Poison

PACKAGING GROUP NO. I

## OTHER INFORMATION

REPORTABLE QUANTITY 10 lb/4.54 kg

### SHIPPING CONTAINERS

"Wet Flo" railcars and trucks; hopper railcars; Flo-Bins® (3000 lb. net); 2000 lb. bag in a box; 100 kilo, 100 lb., and 200 lb. steel drums

### STORAGE CONDITIONS

Store in properly labeled containers in dry, ventilated, secured areas. Keep containers closed and contents dry. Do not store with acids or acid salts, containers with water or weak alkalis, or oxidizing agents. Do not handle or store food, beverages, or tobacco in cyanide areas. Do not store near combustibles or flammables because of cyanide solution runoff from water used for fire fighting.

## ADDITIONAL INFORMATION AND REFERENCES

For further information, see Du Pont Sodium Cyanide Storage and Handling Bulletin.

DATE OF LATEST REVISION/REVIEW: 8/85

PERSON RESPONSIBLE FOR MSDS: J. C. Watts, Du Pont Co., C&P Dept., Chestnut Run, Wilmington, DE 19898, (302) 999-4946

U.S. DEPARTMENT OF LABOR  
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION  
MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,  
Shipbuilding and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME: Various  
(Talco as Distributor)  
ADDRESS: 5201 Unruh Avenue,  
Philadelphia, PA 19135  
CHEMICAL NAME AND SYNONYMS: Cadmium  
CHEMICAL FAMILY: Cadmium

EMERGENCY TELEPHONE NUMBER:  
Chemtrec -- 800-424-9300  
TRADE NAME AND SYNONYMS:  
Cad Balls  
FORMULA: Cd

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES AND SOLVENTS	%	TLV (UNITS)	ALLOYS AND METALLIC COATINGS	%	TLV (UNITS)
PIGMENTS:	NA		BASE METAL:	NA	
CATALYST:	NA		ALLOYS:	NA	
VEHICLE:	NA		METALLIC COATINGS:	NA	
SOLVENTS:	NA		FILLER METAL		
			PLUS COATING OR		
			CORE FLUX:	NA	
ADDITIVES:	NA		OTHERS:	NA	
OTHERS:	NA				
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS OR GASES: NA					

SECTION III - PHYSICAL DATA

BOILING POINT (°C):	766°	SPECIFIC GRAVITY (H <sub>2</sub> O=1):	8.64
VAPOR PRESSURE (mm Hg.):	NA	PERCENT, VOLATILE BY VOLUME (%):	NA
VAPOR DENSITY (AIR=1):	NA	EVAPORATION RATE (____)=1:	NA
SOLUBILITY IN WATER:	Insoluble.		
APPEARANCE AND ODOR:	Bluish silver white metal, no odor.		

SECTION IV - FIRE AND EXPOSION HAZARD DATA

FLASH POINT (METHOD USED): NA  
EXTINGUISHING MEDIA: Dry Chemical.  
SPECIAL FIRE FIGHTING PROCEDURES: Use approved self-contained breathing apparatus.  
UNUSUAL FIRE AND EXPLOSION HAZARDS: Water contact with molten metal may cause explosion.

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-----  
SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE: .02 mg/cu.m. - dust -- .01 mg/cu.m. - fume.  
EFFECTS OF OVEREXPOSURE: Cadmium is transported via blood and stored mainly in liver and kidneys. Cadmium can cause kidney damage, nausea, vomiting, headache.  
EMERGENCY AND FIRST AID PROCEDURES: Inhalation: Remove from exposure; place individual under care of physician. Ingestion: Induce vomiting in conscious individual and call a physician.  
-----  
-----

SECTION VI - REACTIVITY DATA

STABILITY: UNSTABLE: STABLE: X  
INCOMPATIBILITY (MATERIALS TO AVOID): Strong acids and alkalis.  
HAZARDOUS DECOMPOSITION PRODUCTS: At temperatures above the melting point, 321°C, cadmium oxide fumes may be formed.

HAZARDOUS POLYMERIZATION: MAY OCCUR: WILL NOT OCCUR: X  
CONDITIONS TO AVOID: NA  
-----  
-----

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: If Cadmium is spilled, it can be picked up by hand and returned to original container. Gloves should be used.  
WASTE DISPOSAL METHOD: Cadmium wastes must be disposed in accordance with OSHA and EPA regulations.  
-----  
-----

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): Approved respirator for dust or fumes.

VENTILATION: The area surrounding any plating tank should be suitably ventilated to prevent gases, mists, and particulate matter evolved from the plating tank from collecting to injurious levels.

PROTECTIVE GLOVES: Required for hot metal. EYE PROTECTION: Required for fumes, dust or heat.

OTHER PROTECTIVE EQUIPMENT: Appropriate for handling molten metal  
-----  
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SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: NA  
OTHER PRECAUTIONS:  
-----  
-----

THIS MATERIAL SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.

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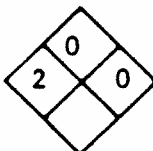
**Rho-Chem**Rho-Chem Corporation  
425 Isis Avenue  
Inglewood, CA 90301**MATERIAL SAFETY  
DATA SHEET**

Essentially similar to OSHA Form 20

REV. 082279

**SECTION I. PRODUCT IDENTIFICATION**

PRODUCT NAME	1,1,1 Trichloroethane	STOCK NO.	2404 Reconstituted 2004 Technical Grade 2354 Electronic/Semiconduc 3354 Reagent U.S.P. Grade
CHEMICAL NAME AND SYNONYMS	Methyl Chloroform	FORMULA	CH <sub>3</sub> CCl <sub>3</sub>
CHEMICAL FAMILY	Chlorinated hydrocarbon	EMERGENCY PHONE NO.	(213) 778-6233

NATIONAL FIRE  
PROTECTION  
ASSOCIATION  
HAZARD  
IDENTIFICATIONAIR QUALITY MANAGEMENT DISTRICT  
PHOTOCHEMICAL REACTIVITYNon-photochemically reactive  
(less than 4%)DEPARTMENT OF TRANSPORTATION  
HAZARD CLASS

ORM-A

**SECTION II. HAZARDOUS INGREDIENTS**

MATERIAL	TLV (UNITS)	%	MATERIAL	TLV (UNITS)	%
1,1,1 Trichloroethane	350	100			

**SECTION III. PHYSICAL DATA**

BOILING POINT ONE atm.	165°F	FREEZING POINT	-34.4°F
SPECIFIC GRAVITY (H <sub>2</sub> O = 1)	1.312 @ 25/25°C.	VAPOR PRESSURE AT 20°C	104.5 mm Hg
VAPOR DENSITY (AIR = 1)	4.55	SOLUBILITY IN WATER % BY WT. AT 20°C	0.07
PERCENT VOLATILES BY VOLUME	100%	EVAPORATION RATE	100 (CCl <sub>4</sub> = 100)
APPEARANCE	Colorless liquid	ODOR	Somewhat ethereal

**SECTION IV. FIRE AND EXPLOSION HAZARD DATA**

FLASH POINT (TEST METHOD)	None (T.O.C.)	FLAMMABLE LIMITS IN AIR (% BY VOLUME)	Upper Non flammable
AUTOIGNITION TEMPERATURE	No available data		Lower Non flammable
EXTINGUISHING MEDIA	Its presence in a fire does not hinder the use of any standard extinguishing media.		
SPECIAL FIREFIGHTING PROCEDURES	Wear self contained breathing apparatus approved by NIOSH. Use water spray to knock down vapors and to cool containers.		
UNUSUAL FIRE AND EXPLOSION HAZARDS	Vapors exposed to high temperatures that occur in open flames, welding arcs, and open electric heaters decompose to give off hydrogen chloride and other toxic and irritating vapors.		

29017

## SECTION V. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	350ppm	MAXIMUM CONCENTRATION PER DURATION LEVEL	800ppm/5 minutes in 2 hours
EFFECTS OF EXPOSURE	<p><u>Eyes</u> - can cause severe irritation, redness, tearing, blurred vision.  <u>Skin</u> - prolonged or repeated contact can cause moderate irritation, defatting dermatitis. <u>Breathing</u> - excessive inhalation of vapors can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness, and even asphyxiation. <u>Swallowing</u> - can cause gastrointestinal irritation, nausea, vomiting, diarrhea.</p>		
EMERGENCY AND FIRST AID PROCEDURES	<p><u>Eyes</u> - flush with large amounts of water. <u>Skin</u> - thoroughly wash exposed area with soap and water. Remove contaminated clothing and launder before re-use. <u>Breathing</u> - if affected remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Do not give stimulants. Epinephrine or ephedrine may adversely affect the heart with fatal results. <u>Swallowed</u> - induce vomiting. <u>Never</u> give anything by mouth to an unconscious person.</p>		

## SECTION VI. REACTIVITY DATA

STABILITY	<input type="checkbox"/> Unstable <input checked="" type="checkbox"/> Stable	Hazardous Polymerization	<input type="checkbox"/> May Occur <input checked="" type="checkbox"/> Will Not Occur
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## SECTION VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Absorb liquid on rags, mops, or floor absorbent and place in closed containers. Provide adequate ventilation and wear adequate personal protective equipment.
WASTE DISPOSAL METHOD	Depending on size of spill, absorbent materials used may be dried in a safe place out of doors, or deposited in a posted toxic substance landfill in accordance with local regulations.

## SECTION VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION	None for normal use. NIOSH/MESA approved self-contained breathing apparatus, positive pressure hose masks, air-line mask for spills or extreme conditions.		
VENTILATION	Provide sufficient mechanical and/or local exhaust ventilation to maintain exposure below threshold limit value.		
PROTECTIVE GLOVES	Polyvinyl alcohol, polyethylene	EYE PROTECTION Chemical safety goggles	OTHER PROTECTIVE EQUIPMENT Rubber apron

## SECTION IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	Store drums in a cool place, bung up and tightly closed. Empty containers continue to be hazardous because they retain product residues; vapor or liquid. Storage tanks should be adequately vented for filling and pressure equalization. Vents from indoor tanks should terminate outdoors. Avoid contact with strong oxidizing agents (nitric acid, permanganates, etc.), strong alkalies (sodium hydroxide, ammonium hydroxide, etc.) and alkali metals.
OTHER PRECAUTIONS	If product is used in a vapor degreaser: DO NOT POUR COLD SOLVENT INTO BOILING SOLVENT. A violent eruption may occur similar to the reaction of cold water poured into hot oil or grease. Severe body and facial burns and/or fire may occur. Add cold solvent in the morning before degreaser start-up. DO NOT EXCEED RECOMMENDED CLEAN-OUT TEMPERATURE or recommended clean-out specific gravity. Solvent decomposition or auto ignition of combustible contaminants may occur.

# MATERIAL SAFETY DATA SHEET

RHO-CHEM CORP.  
425 1315 AVE.  
INGLEWOOD, CA 90301  
(213) 776-6275

RHO SOLV 1213  
EFFECTIVE 8-12-86  
PAGE 1

RHO SOLV 1213  
PETROLEUM NAPHTHA

## SECTION 1

## IDENTIFICATION

PRODUCT: RHO SOLV 1213  
CHEMICAL FAMILY: HYDROCARBON NAPHTHA  
SYNONYM: PETROLEUM NAPHTHA  
STOCK NUMBERS:

TECHNICAL GRADE: 1213

RECONSTITUTED GRADE: N/A

ELECTRONIC/SEMI GRADE: N/A

A.C.S. REAGENT GRADE: N/A

## DEPARTMENT OF TRANSPORTATION (DOT) IDENTIFICATION

DOT PROPER SHIPPING NAME: PETROLEUM NAPHTHA  
DOT HAZARD CLASS: FLAMMABLE LIQUID  
DOT IDENTIFICATION NUMBER: UN-1265

## HAZARDOUS WASTE IDENTIFICATION

WASTE NUMBER: US EPA D001

CALIFORNIA: 213

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT:  
THIS CHEMICAL IS NOT PHOTOCHEMICALLY REACTIVE

## SECTION 2

## PRODUCT/COMPOSITION DATA

COMPONENT #	COMPONENT	CAS NUMBER	PERCENT
	RHO SOLV 1213	64742-69-8	100
1	PARAFFINS AND NAPHTHENES	NOT APPL.	91
2	XYLENE	100-20-7	7
3	ETHYLBENZENE	100-41-4	2
4	OLEFINS	NOT APPL.	<0.1

## SECTION 3

## PHYSICAL DATA

BOILING POINT  
OR RANGE  
(DEG. F)

SPECIFIC  
GRAVITY  
(25/25C)

SOLUBILITY IN  
WATER @25C  
(WT %)

246-270

0.73

NEGLECTIBLE

2-1-86



VAPOR PRESSURE (mm Hg)	VAPOR DENSITY IN AIR (AIR=1)	% VOLATILE BY VOLUME	EVAPORATION RATE n-BUTYL ACETATE = 1
------------------------------	---------------------------------	-------------------------	---

24 @ 100F	0.8	100	1.2
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APPEARANCE: CLEAR COLORLESS LIQUID

ODOR: HYDROCARBON ODOR

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#### SECTION 4A HEALTH INFORMATION-HEALTH RATING

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HAZARDOUS MATERIALS IDENTIFICATION SYSTEMS (HMIS)

HEALTH (1)

FIRE (2)

REACTIVITY (3)

PERSONAL PROTECTION (4) SAFETY GLASSES  
GLOVES / APRON

---

#### SECTION 4B HEALTH INFORMATION-ACUTE TOXICITY DATA

---

COMPONENT #	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
1	RAT: >4 ML/KG	RAT: >4 ML/KG	RAT: 3400 PPM/4HR
2	RAT: 4.3 G/KG	RABBIT: >4 ML/KG	RAT: 6700 PPM/4HR

---

#### SECTION 4C HEALTH INFORMATION-OCCUPATIONAL EXPOSURE LIMITS

---

COMPONENT	(OSHA)		(ACGIH)	
	PEL/TWA	PEL CEILING	TLV/TWA	TLV/STEL
1	NONE ESTABLISHED		300 PPM	400 PPM
2	100 PPM	300 PPM	100 PPM	150 PPM

---

#### SECTION 4D HEALTH INFORMATION - EFFECTS OF EXPOSURE

---

EFFECTS DESCRIBED IN THIS SECTION ARE BELIEVED NOT TO OCCUR IF EXPOSURES TO THE PRODUCT ARE MAINTAINED AT OR BELOW THE OCCUPATIONAL EXPOSURE LIMITS LISTED IN SECTION 4C. PREEXISTING SKIN, EYE, AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE.

POTENTIAL ROUTE OF ENTRY

INHALATION XSKIN ---INGESTION ---

INHALATION:

VAPORS MAY BE IRRITATING TO NOSE, THROAT, AND RESPIRATORY TRACT. HIGH VAPOR CONCENTRATIONS MAY RESULT IN CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION.

SKIN:

LIQUID IS IRRITATING TO THE SKIN. PROLONGED OR REPEATED CONTACT MAY CAUSE SKIN TO BECOME REDDENED, ROUGH, AND DRY DUE TO THE REMOVAL OF NATURAL OILS, AND MAY RESULT IN DERMATITIS.

EYES:

LIQUID IS MILDLY IRRITATING TO THE EYES.

INGESTION:

SWALLOWING PRODUCT MAY RESULT IN GASTROINTESTINAL IRRITATION. NAUSEA, VOMITING, DIARRHEA.

ASPIRATION (BREATHING) OF VOMITUS INTO THE LUNGS MUST BE AVOIDED AS EVEN SMALL QUANTITIES MAY RESULT IN ASPIRATION PNEUMONITIS AND SYSTEMIC EFFECTS.

SIGNS AND SYMPTOMS OF EXCESSIVE EXPOSURE:

INTENTIONAL ABUSE, MISUSE, OR OTHER MASSIVE EXPOSURE MAY RESULT IN DIFFICULT BREATHING, NAUSEA, VOMITING AND HEADACHE. COMA AND OR DEATH ARE POSSIBLE.

CENTRAL NERVOUS SYSTEM DEPRESSION RANGES FROM LIGHT HEADEDNESS TO UNCONSCIOUSNESS AND DEATH. CNS DEPRESSION IS EVIDENCED BY DIZZINESS, DROWSINESS AND NAUSEA.

ASPIRATION PNEUMONITIS MAY BE EVIDENCED BY COUGHING, LABORED BREATHING AND CYANOSIS (BLUISH SKIN). IN SEVERE CASES DEATH MAY OCCUR.

SECTION 4E

SUPPLEMENTAL HEALTH INFORMATION

IS THE PRODUCT OR A COMPONENT OF THE PRODUCT LISTED AS A CARCINOGEN BY THE NATIONAL TOXICOLOGY PROGRAM (NTP), INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC), OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) OR IS IT THE SUBJECT OF A HAZARD EVALUATION SYSTEM AND INFORMATION SERVICE (HESIS) HAZARD ALERT?

COMPONENT NUMBER	NTP CARCINOGEN	OSHA CARCINOGEN	IARC CARCINOGEN	HESIS HAZARD ALERT
1	NO	NO	NO	NO
2	NO	NO	NO	NO

---

COMPONENT INFORMATION

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PARAFFINS AND NAPHTHENES

MALE RATS EXPOSED FOR 90 DAYS BY INHALATION TO VAPORS OF SIMILAR SOLVENTS SHOWED EVIDENCE OF KIDNEY DAMAGE. THE RELEVANCE OF THIS EFFECT TO MAN IS UNKNOWN. IN ONE OF THE STUDIES A LOW GRADE ANEMIA WAS ALSO OBSERVED.

XYLENE

LABORATORY ANIMALS EXPOSED BY VARIOUS ROUTES TO HIGH DOSES OF XYLENE SHOWED EVIDENCE OF EFFECTS IN THE LIVER, KIDNEYS, LUNGS, SPLEEN, HEART AND ADRENALS. RATS EXPOSED TO XYLENE VAPOR DURING PREGNANCY SHOWED EMBRYO/FETOTOXIC EFFECTS. MICE EXPOSED ORALLY TO DOSES PRODUCING MATERNAL TOXICITY ALSO SHOWED EMBRYO/FETOTOXIC EFFECTS.

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SECTION 6

EMPLOYEE PROTECTION

---

VENTILATION:

MAINTAIN WORKPLACE VAPOR CONCENTRATIONS AT OR BELOW THE OCCUPATIONAL EXPOSURE LIMITS LISTED IN SECTION 40.

PROTECTIVE MEASURES FOR MAINTENANCE:

EXERCISE REASONABLE CARE AND CAUTION. AVOID BREATHING VAPORS. STORE IN A COOL PLACE. CONCENTRATED VAPORS OF THIS PRODUCT ARE HEAVIER THAN AIR AND WILL COLLECT IN LOW AREAS SUCH AS PITS, DEGREASERS, STORAGE TANKS, AND OTHER CONFINED AREAS. DO NOT ENTER THESE AREAS WHERE VAPORS OF THIS PRODUCT ARE SUSPECTED UNLESS SPECIAL BREATHING APPARATUS IS USED AND AN OBSERVER IS PRESENT FOR ASSISTANCE. DO NOT PRESSURE PRODUCT OUT OF VESSEL OR TRANSPORT CONTAINER WITH AIR.

RESPIRATORY PROTECTION:

AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION 40) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.124 USE EITHER A FULL-FACE, ATMOSPHERE-SUPPLYING RESPIRATOR OR AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS.

SKIN PROTECTION:

FOR BRIEF CONTACT, NO PRECAUTIONS OTHER THAN CLEAN BODY-COVERING CLOTHING SHOULD BE NEEDED. WHEN PROLONGED OR FREQUENTLY REPEATED CONTACT COULD OCCUR, USE PROTECTIVE CLOTHING IMPERVIOUS TO THIS MATERIAL. SELECTION OF SPECIFIC ITEMS SUCH AS GLOVES, BOOTS, APRON OR FULL-BODY SUIT WILL DEPEND ON OPERATION.

EYE PROTECTION:

USE SAFETY GLASSES. WHERE CONTACT WITH LIQUID IS LIKELY, CHEMICAL GOGGLES ARE RECOMMENDED BECAUSE EYE CONTACT WITH THIS MATERIAL MAY CAUSE PAIN, EVEN THOUGH IT IS UNLIKELY TO CAUSE INJURY. CONTACT LENSES SHOULD NOT BE WORN.

HYGIENE:

AVOID CONTACT WITH SKIN AND AVOID BREATHING VAPORS. DO NOT EAT, DRINK OR SMOKE IN WORK AREA. WASH HANDS PRIOR TO EATING, DRINKING, OR USING RESTROOM.

---

SECTION 6

EMERGENCY AND FIRST AID

---

EYE CONTACT:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

SKIN CONTACT:

REMOVE CONTAMINATED CLOTHING/SHOES AND WIPE EXCESS FROM SKIN. FLUSH SKIN WITH WATER. FOLLOW BY WASHING WITH SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION. DO NOT REUSE CLOTHING UNTIL CLEANED.

INHALATION:

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING. GET MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO THE LUNGS. GET MEDICAL ATTENTION. SEE NOTE TO PHYSICIAN.

NOTE TO PHYSICIAN:

BECAUSE RAPID ABSORPTION MAY OCCUR THROUGH LUNGS IF ASPIRATED AND CAUSE SYSTEMIC EFFECTS, THE DECISION OF WHETHER TO INDUCE VOMITING OR NOT SHOULD BE MADE BY AN ATTENDING PHYSICIAN. IF LAVAGE IS PERFORMED, SUGGEST ENDOTRACHEAL AND/OR ESOPHAGEAL CONTROL. DANGER FROM LUNG ASPIRATION MUST BE WEIGHED AGAINST TOXICITY WHEN CONSIDERING EMPTYING THE STOMACH. IF BURN IS PRESENT, TREAT AS ANY THERMAL BURN, AFTER DECONTAMINATION. EXPOSURE MAY INCREASE "MYOCARDIAL IRRITABILITY". DO NOT ADMINISTER SYMPATHOMIMETIC DRUGS UNLESS ABSOLUTELY NECESSARY. NO SPECIFIC ANTIDOTE. SUPPORTIVE CARE. TREATMENT BASED ON JUDGEMENT OF THE PHYSICIAN IN RESPONSE TO REACTIONS OF THE PATIENT.

---

SECTION 7

FIRE AND EXPLOSION HAZARDS

---

FLASH POINT 31 F (TCC)

FLAMMABLE LIMITS: VOLUME IN AIR UPPER LIMITS: 7.0%  
LOWER LIMITS: 1.0%

EXTINGUISHING MEDIA:

USE WATER FOG, FOAM, DRY CHEMICAL OR CARBON DIOXIDE. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS:

WARNING. FLAMMABLE. CLEAR FIRE AREA OF UNPROTECTED PERSONNEL. DO NOT ENTER CONFINED FIRE SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS) INCLUDING A POSITIVE PRESSURE MICH APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

CONTAINERS EXPOSED TO INTENSE HEAT FROM FIRES SHOULD BE COOLED WITH WATER TO PREVENT VAPOR PRESSURE BUILDUP WHICH COULD RESULT IN CONTAINER RUPTURE. CONTAINER AREAS EXPOSED TO DIRECT FLAME CONTACT SHOULD BE COOLED WITH LARGE QUANTITIES OF WATER AS NEEDED TO PREVENT WEAKENING OF CONTAINER STRUCTURE.

VAPORS ARE HEAVIER THAN AIR AND MAY TRAVEL ALONG THE GROUND OR MAY BE MOVED BY VENTILATION AND IGNITED BY PILOT LIGHTS, OTHER FLAMES, SPARKS, HEATERS, SMOKING, ELECTRIC MOTORS, STATIC DISCHARGE, OR OTHER IGNITION SOURCES AT LOCATIONS DISTANT FROM MATERIAL HANDLING POINT.

NEVER USE WELDING OR CUTTING TORCH ON OR NEAR DRUM (EVEN EMPTY) BECAUSE PRODUCT (EVEN JUST RESIDUE) CAN IGNITE EXPLOSIVELY.

---

SECTION 8

REACTIVITY

---

STABILITY: THIS PRODUCT IS STABLE

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

CONDITIONS AND MATERIALS TO AVOID:

AVOID HEAT, FLAME AND CONTACT WITH STRONG OXIDIZING AGENTS SUCH AS LIQUID CHLORINE, CONCENTRATED OXYGEN, SODIUM HYPOCHLORITE OR CALCIUM HYPOCHLORITE.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE AND UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED DURING COMBUSTION.

---

SECTION 9

SPILL AND DISPOSAL PRACTICES

---

SPILL:

EVACUATE THE AREA, VENTILATE, AND AVOID BREATHING VAPORS. DIKE AREA TO CONTAIN SPILL. CLEAN UP AREA (WEAR PROTECTIVE EQUIPMENT) BY MOPPING OR WITH ABSORBENT MATERIAL AND PLACE IN CLOSED CONTAINERS FOR DISPOSAL. AVOID CONTAMINATION OF GROUND AND SURFACE WATERS. DO NOT FLUSH TO SEWER.

WASTE DISPOSAL:

RECOVERED LIQUIDS MAY BE SENT TO A LICENSED RECLAIMER OR INCINERATION FACILITY. CONTAMINATED MATERIAL MUST BE DISPOSED OF IN A PERMITTED HAZARDOUS WASTE MANAGEMENT FACILITY. CONSULT FEDERAL, STATE OR LOCAL DISPOSAL AUTHORITIES FOR APPROVED PROCEDURES.

---

SECTION 10

SPECIAL PRECAUTIONS

---

KEEP LIQUID AND VAPOR AWAY FROM HEAT, SPARKS AND FLAME. SURFACES THAT ARE SUFFICIENTLY HOT MAY IGNITE EVEN LIQUID PRODUCT IN THE ABSENCE OF SPARKS OR FLAME. EXTINGUISH PILOT LIGHT, CIGARETTES AND TURN OFF OTHER SOURCES OF IGNITION PRIOR TO USE AND UNTIL ALL VAPORS ARE GONE. VAPORS MAY ACCUMULATE AND TRAVEL TO IGNITION SOURCES DISTANT FROM THE HANDLING SITE. FLASH-FIRE CAN RESULT. KEEP CONTAINERS CLOSED WHEN NOT IN USE. USE WITH ADEQUATE VENTILATION.

CONTAINERS, EVEN THOSE THAT HAVE BEEN EMPTIED. CAN CONTAIN EXPLOSIVE VAPORS. DO NOT CUT, DRILL, GRIND, WELD OR PERFORM SIMILAR OPERATIONS ON OR NEAR CONTAINERS.

STATIC ELECTRICITY MAY ACCUMULATE AND CREATE A FIRE HAZARD. GROUND FIXED EQUIPMENT. BOND AND GROUND TRANSFER CONTAINERS AND EQUIPMENT.

#### HANDLING AND STORAGE:

HANDLE WITH REASONABLE CARE AND CAUTION. AVOID BREATHING VAPORS. VAPORS OF THIS PRODUCT ARE HEAVIER THAN AIR AND WILL COLLECT IN LOW AREAS SUCH AS PITS, DEGREASERS, STORAGE TANKS, AND OTHER CONFINED AREAS. DO NOT ENTER THESE AREAS WHERE VAPORS OF THIS PRODUCT ARE SUSPECTED UNLESS SPECIAL BREATHING APPARATUS IS USED AND AN OBSERVER IS PRESENT FOR ASSISTANCE.

STORE DRUMS IN A COOL PLACE, BUNG UP AND TIGHTLY CLOSED. STORAGE TANKS SHOULD BE ADEQUATELY VENTED FOR FILLING AND PRESSURE EQUALIZATION. VENTS FROM INDOOR TANKS SHOULD TERMINATE OUTDOORS.

WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE.

---

THE INFORMATION HEREIN IS GIVEN IN GOOD FAITH, BUT NO WARRANTY, EXPRESS OR IMPLIED IS MADE. SINCE THE ACTUAL USE OF THIS PRODUCT BY OTHERS IS BEYOND THE CONTROL OF RHO-CHEM CORPORATION, IT IS THE USER'S RESPONSIBILITY TO DETERMINE THE SAFETY, TOXICITY AND SUITABILITY FOR HIS USE OF THIS PRODUCT.

## Material Safety

## GENERAL INFORMATION

Methylene Chloride is a clear, colorless nonflammable liquid with a sweet odor perceptible at concentrations below 250 ppm.


**Diamond Shamrock**

## Data Sheet

349-A

## I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME  
DIAMOND SHAMROCK CORPORATION

REGULAR TELEPHONE NO. Contact Local Sales Office  
EMERGENCY TELEPHONE NO. 216-357-7070

ADDRESS  
Divisional Technical Center, P. O. Box 191, Painesville, Ohio 44077

TRADE NAME  
METHYLENE CHLORIDE

SYNONYMS  
Dichloromethane ( $\text{CH}_2\text{Cl}_2$ )

## II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA
METHYLENE CHLORIDE	100	PEL* = 500 ppm (8-hr. TWA)
* OSHA Permissible Exposure Limit (PEL)		

## III PHYSICAL DATA

BOILING POINT, 760 MM HG 39.8°C (104°F)	MELTING POINT Not applicable	FREEZING POINT -96.7°C (-142°F)
SPECIFIC GRAVITY ( $\text{H}_2\text{O}=1$ ) 1.32	VAPOR PRESSURE 420 mm Hg @ 25°C	
VAPOR DENSITY (AIR=1) 2.93	SOLUBILITY IN $\text{H}_2\text{O}$ , % BY WT. 1.3	
% VOLATILES BY VOL. 100	EVAPORATION RATE (Ether = 1) 0.62	
APPEARANCE AND ODOR Clear colorless liquid with ether-like odor		
pH Not applicable		

METHYLENE CHLORIDE

No Reactivity Hazard

0

Slightly Combustible

1

Moderate Health Hazard

2

Ratings based on NIOSH "Identification System for Occupationally Hazardous Materials" (1974)

EC-S-59

29019

All information, recommendations and suggestions appearing herein concerning our product are based upon tests and data believed to be reliable, however, it is the user's responsibility to determine the safety, toxicity and suitability for his own use of the product described herein. Since the actual use by others is beyond our control, no guarantee, expressed or implied, is made by Diamond Shamrock Corporation as to the effects of such use, the results to be obtained, or the safety and toxicity of the product nor does Diamond Shamrock Corporation assume any liability arising out of use by others of the product referred to herein. Nor is the information herein to be construed as absolutely complete. Additional information may be necessary or desirable when particular or exceptional conditions or circumstances exist or because of applicable laws or government regulations.



# Data Sheet

## IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)

None (TCC)

AUTOIGNITION TEMPERATURE

662°C (1224°F)

FLAMMABLE LIMITS IN AIR, % BY VOL.

@ 25°C (77°F)

LOWER

14

UPPER

25

### EXTINGUISHING MEDIA

Fires involving methylene chloride are unlikely, but should one occur, it may be controlled by carbon dioxide, dry chemicals, or water fog.

### SPECIAL FIRE FIGHTING PROCEDURES

Self-contained respiratory protection should be provided for firemen fighting fires in buildings or confined areas where methylene chloride is stored. Storage containers exposed to fire should be kept cool with a water spray, in order to prevent pressure buildup.

### UNUSUAL FIRE AND EXPLOSION HAZARD

Methylene chloride is nonflammable and nonexplosive under normal conditions of use. At high temperatures, methylene chloride decomposes to give off hydrochloric acid as gas plus other toxic and irritating vapors such as phosgene. If storage containers are exposed to excessive heat, overpressurization of the containers can result.

## V HEALTH HAZARD INFORMATION

### HEALTH HAZARD DATA

PEL = 500 ppm (8-hour TWA)

### ROUTES OF EXPOSURE

#### INHALATION

Irritates respiratory tract.

#### SKIN CONTACT

Mildly irritating to skin. Skin contact may produce a burning sensation. Prolonged or repeated contact may cause skin to become red, rough and dry due to the removal of natural oils and may result in dermatitis.

#### SKIN ABSORPTION

Methylene Chloride is rapidly absorbed through the skin.

#### EYE CONTACT

An irritant of the eyes causing pain, lacrimation, and general inflammation.

#### INGESTION

In industrial environments, ingestion is unlikely, but, if ingested, it can irritate the gastrointestinal tract. It could produce chemical pneumonia if vomiting results in aspiration into the lungs. It may ultimately result in unconsciousness and even death.

### EFFECTS OF OVEREXPOSURE

#### ACUTE OVEREXPOSURE

Inhalation of vapors can cause headache, dizziness and stupor, nausea, and vomiting. Severe, overexposure may cause muscular incoordination, unconsciousness, and death.

#### CHRONIC OVEREXPOSURE

Can cause headache, mental confusion, depression, fatigue, loss of appetite, nausea, vomiting, cough, loss of sense of balance, and visual disturbances. Prolonged or repeated skin contact may cause dermatitis.

### EMERGENCY AND FIRST AID PROCEDURES

**Object is to Seek Medical Attention Immediately**

#### EYES:

Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire eye surface. Seek medical attention immediately.

#### SKIN:

Wash contaminated area with soap and water. A soothing ointment may be applied to irritated skin after cleansing. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. Seek medical attention.

#### INHALATION:

Get person out of contaminated area to fresh air. If breathing has stopped artificial respiration should be started. Oxygen may be administered, if readily available. Seek medical attention immediately.

#### INGESTION:

If swallowed, DO NOT induce vomiting. If vomiting occurs spontaneously, position individual's head to keep airway clear. Never give anything by mouth to an unconscious person. Seek medical attention immediately.

### NOTES TO PHYSICIAN

Methylene chloride overexposure can produce elevated carboxyhemoglobin levels.

# ata Sheet

## VI REACTIVITY DATA

### CONDITIONS CONTRIBUTING TO INSTABILITY

Under normal conditions of use, Methylene Chloride is stable.

### INCOMPATIBILITY

Avoid contacting Methylene Chloride with pure oxygen, alkali metals, open flames, and electrical arcs.

### HAZARDOUS DECOMPOSITION PRODUCTS

At high temperatures, Methylene Chloride decomposes to give off hydrogen chloride vapor and small quantities of other toxic and irritating vapors such as phosgene. **GAS TOXIC ATTACKS LUNGS**

### CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

NONE

## VII SPILL OR LEAK PROCEDURES

### STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Leaks should be stopped. Spills should be cleaned up immediately. Large spills should be contained and removed by vacuum truck. Smaller spills may be soaked up with absorbent materials, which should be placed in closed containers, labeled and stored in a safe place out of doors to await proper disposal. Persons performing this work should wear adequate personal protective equipment and clothing.

### NEUTRALIZING CHEMICALS

NONE

### WASTE DISPOSAL METHOD

Dispose in accordance with all federal, state and local health pollution regulations. Methylene Chloride is normally recovered from residues by distillation. Small quantities may be disposed via an incineration-scrubber system or a licensed waste hauler. If regulations permit, wet absorbent materials may be air dried in a safe open, unoccupied area.

## VIII INDUSTRIAL HYGIENE CONTROL MEASURES

### VENTILATION REQUIREMENTS

Work areas employing Methylene Chloride should be isolated and contained, and provided with adequate local exhaust ventilation to maintain the air concentration of Methylene Chloride below 500 ppm (8-hour TWA) as required by OSHA.

### SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

#### RESPIRATORY (SPECIFY IN DETAIL)

Self-contained breathing apparatus (compressed oxygen should not be used in tanks or other confined spaces), positive-pressure hose mask, air-lined masks, and NIOSH-approved industrial canister-type gas masks (concentration not exceeding 2% by volume used for short periods of exposure only) are acceptable.

#### EYE

Chemical safety goggles and plastic face shield should be worn when there is a danger of splashing. Spectacle-type glasses do not provide satisfactory protection.

#### GLOVES

Gloves of polyvinyl alcohol or other solvent-resistant materials should be worn to minimize skin contact.

#### OTHER CLOTHING AND EQUIPMENT

Hard hats, chemical-resistant safety shoes, and plastic apron should be worn when handling Methylene Chloride. Eye bath and safety shower should be provided in all areas in which Methylene Chloride is used and/or handled.

# Data Sheet

## IX SPECIAL PRECAUTIONS

### PRECAUTIONARY STATEMENTS

#### WARNING! VOLATILE SOLVENT

Causes irritation of the eyes, skin, and respiratory tract.  
Prolonged breathing of vapor can cause loss of consciousness and may result in death.  
**DO NOT** get in eyes, on skin, on clothing.  
**DO NOT** take internally.  
Avoid breathing vapors.  
When handling, wear chemical splash goggles, protective clothing, and solvent-resistant gloves.  
Wash thoroughly after handling.  
Use adequate ventilation in work area.  
Employ respiratory protection when overexposed to vapors.  
Avoid contact with flame or hot glowing surfaces to prevent decomposition resulting in toxic and irritating vapors.  
Keep container tightly closed.  
Store in a cool, ventilated place.

#### First Aid:

##### In case of contact:

**For eyes:** Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire eye surface. **Seek medical attention immediately.**

**For skin:** Wash with plenty of soap and water. A soothing ointment may be applied to irritated skin after cleansing. Remove contaminated clothing and footwear and wash clothing before reuse. Discard footwear which cannot be decontaminated. **Seek medical attention.**

**Inhalation:** Get person out of contaminated area to fresh air. If breathing has stopped artificial respiration should be started. Oxygen may be administered, if available. **Seek medical attention immediately.**

**Ingestion:** If swallowed, **DO NOT** induce vomiting. If vomiting occurs spontaneously, position individual's head to keep airway clear. **NEVER** give anything by mouth to an unconscious person. **Seek medical attention immediately.**

**Note to physician:** Methylene Chloride overexposure can produce elevated carboxyhemoglobin levels.

**For Fire:** Use CO<sub>2</sub>, dry chemicals, or water fog.

**Spill or Leak:** Leaks should be stopped. Spills should be cleaned up immediately. Large spills should be contained and removed by vacuum truck. Smaller spills may be soaked up with absorbent materials, which should be placed in closed containers, labeled, and stored in a safe place out of doors to await proper disposal. Persons performing this work should wear adequate personal protective equipment and clothing.

#### For Industrial Use Only

### OTHER HANDLING AND STORAGE REQUIREMENTS

Under normal conditions, Methylene Chloride may be stored satisfactorily in galvanized iron, black iron or steel. Aluminum is not generally recommended for storage or handling. Store drums in a cool place, bung up and closed tightly. Ventilation should be provided at the floor level. Do not store in pits, depressions, basements or unventilated areas. All tanks should have a top and bottom manhole and a vent of a diameter at least equal to that of the fill or discharge pipe. Vent indoor tanks outside in a location such that escaping vapor will not contaminate any work space air. Vertical tanks should be of the closed top design. Normally, a dryer and safety seal on the vent is recommended.

DEPARTMENT OF TRANSPORTATION INFORMATION  
PROPER SHIPPING NAME: Methylene Chloride\*  
HAZARD CLASS: ORM-A\*

\*Regulated Only for Air Transportation

DATE

April 1, 1980

**INGESTION**

LUBRICATING OILS ARE GENERALLY CONSIDERED NO MORE THAN SLIGHTLY TOXIC IF SWALLOWED

**SIGNS AND SYMPTOMS**

IRRITATION AS NOTED ABOVE.

**AGGRAVATED MEDICAL CONDITIONS**

PREEXISTING SKIN AND RESPIRATORY DISORDERS MAY BE AGGRAVATED BY EXPOSURE TO THIS PRODUCT

**SECTION IV****OCCUPATIONAL EXPOSURE LIMITS**

NO.	PEL/TWA	OSHA	PEL/CEILING	TLV/TWA	ACGIH	TLV/STEL	OTHER
F	5 MG/M3*		NONE	5 MG/M3*		10 MG/M3*	NONE

100% MIST, MINERAL

PEL - PERMISSIBLE EXPOSURE LIMIT

TLV - 8 HR OCCUPATIONAL EXPOSURE WORKING LIFE TIME

**SECTION V****EMERGENCY AND FIRST AID PROCEDURES****EYE CONTACT**

FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION.

**SKIN CONTACT**

REMOVE CONTAMINATED CLOTHING AND WIPE EXCESS OFF. WASH WITH SOAP AND WATER OR A WATERLESS HAND CLEANER FOLLOWED BY SOAP AND WATER. IF IRRITATION OCCURS, GET MEDICAL ATTENTION.

**INHALATION**

REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GET MEDICAL ATTENTION.

**INGESTION**

DO NOT INDUCE VOMITING. IN GENERAL NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES OF PRODUCT ARE INGESTED. HOWEVER, GET MEDICAL ADVICE.

**NOTE TO PHYSICIAN**

IN GENERAL, EMESIS INDUCTION IS UNNECESSARY IN HIGH VISCOSITY, LOW VOLATILITY PRODUCTS, I.E., MOST OILS AND GREASES.

**SECTION VI****SUPPLEMENTAL HEALTH INFORMATION**

NONE IDENTIFIED.

**SECTION VII****PHYSICAL DATA**

BOILING POINT: NOT AVAILABLE  
(DEG F)

SPECIFIC GRAVITY: 0.8718  
(H2O=1)

VAPOR PRESSURE: NOT AVAILABLE  
(MM HG)

MELTING POINT: -75 (POUR POINT)  
(DEG F)

SOLUBILITY: NEGLIGIBLE  
(IN WATER)  
LITTLE IMPORTANCE

VAPOR DENSITY: NOT AVAILABLE  
(AIR=1)

EVAPORATION RATE (N-BUTYL ACETATE = 1): NOT AVAILABLE

VIS. CS (40 DEG C)  
20

APPEARANCE AND ODOR: AERIAL LIQUID SLIGHT HYDROCARBON ODOR

## SECTION VIII

## FIRE AND EXPLOSION HAZARDS

FLASH POINT AND METHOD:  
210 DEG F (CCO)FLAMMABLE LIMITS % VOLUME IN AIR  
LOWER N.A.V. UPPER N.A.V.

## EXTINGUISHING MEDIA

USE WATER FOG, FOAM, DRY CHEMICAL OR CO2. DO NOT USE A DIRECT STREAM OF WATER. PRODUCT WILL FLOAT AND CAN BE REIGNITED ON SURFACE OF WATER.

## SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS

MATERIAL WILL NOT BURN UNLESS PREHEATED. DO NOT ENTER CONFINED FIRE-SPACE WITHOUT FULL BUNKER GEAR (HELMET WITH FACE SHIELD, BUNKER COATS, GLOVES AND RUBBER BOOTS), INCLUDING A POSITIVE-PRESSURE NIOSH-APPROVED SELF-CONTAINED BREATHING APPARATUS. COOL FIRE EXPOSED CONTAINERS WITH WATER.

## SECTION IX

## REACTIVITY

STABILITY STABLEHAZARDOUS POLYMERIZATION: WILL NOT OCCUR  
CHEMICAL BREAKDOWN IN WHICH ONE  
LARGE MOLECULECONDITIONS AND MATERIALS TO AVOID:  
AVOID HEAT, OPEN FLAMES AND OXIDIZING MATERIALS.HAZARDOUS DECOMPOSITION PRODUCTS - CHEMICAL BREAKDOWN

THERMAL DECOMPOSITION PRODUCTS ARE HIGHLY DEPENDENT ON THE COMBUSTION CONDITIONS. A COMPLEX MIXTURE OF AIRBORNE SOLID, LIQUID, PARTICULATES AND GASES WILL EVOLVE WHEN THIS MATERIAL UNDERGOES PYROLYSIS OR COMBUSTION. CARBON MONOXIDE AND OTHER UNIDENTIFIED ORGANIC COMPOUNDS MAY BE FORMED UPON COMBUSTION.

## SECTION X

## EMPLOYEE PROTECTION

RESPIRATORY PROTECTION

IF EXPOSURE MAY OR DOES EXCEED OCCUPATIONAL EXPOSURE LIMITS (SECTION IV) USE A NIOSH-APPROVED RESPIRATOR TO PREVENT OVEREXPOSURE. IN ACCORD WITH 29 CFR 1910.134 USE EITHER AN ATMOSPHERE-SUPPLYING RESPIRATOR OR AN AIR-PURIFYING RESPIRATOR FOR ORGANIC VAPORS AND PARTICULATES

PROTECTIVE CLOTHINGWEAR CHEMICAL RESISTANT GLOVES AND OTHER PROTECTIVE CLOTHING AS REQUIRED TO MINIMIZE SKIN CONTACT. WEAR SAFETY GOGGLES TO AVOID EYE CONTACT. TEST DATA FROM PUBLISHED LITERATURE AND/OR GLOVE AND CLOTHING MANUFACTURERS INDICATE THE BEST PROTECTION IS PROVIDED BY NITRILE GLOVES.

## SECTION XI

## ENVIRONMENTAL PROTECTION

SPILL OR LEAK PROCEDURESMAY BURN ALTHOUGH NOT READILY IGNITABLE. USE CAUTIOUS JUDGMENT WHEN CLEANING UP LARGE SPILLS. \*\*\* LARGE SPILLS \*\*\* WEAR RESPIRATOR AND PROTECTIVE CLOTHING AS APPROPRIATE. SHUT OFF SOURCE OF LEAK IF SAFE TO DO SO. DIKE AND CONTAIN. REMOVE WITH VACUUM TRUCKS OR PUMP TO STORAGE SALVAGE VESSELS. SOAK UP RESIDUE WITH AN ADSORBENT SUCH AS CLAY, SAND, OR OTHER SUITABLE MATERIALS; DISPOSE OF PROPERLY. FLUSH AREA WITH WATER TO REMOVE TRACE RESIDUE. \*\*\* SMALL SPILLS \*\*\* TAKE UP WITH AN ABSORBENT MATERIAL AND DISPOSE OF PROPERLY.WASTE DISPOSALPLACE IN AN APPROPRIATE DISPOSAL FACILITY IN COMPLIANCE WITH LOCAL REGULATIONS.ENVIRONMENTAL HAZARDSTHIS PRODUCT IS CLASSIFIED AS AN OIL UNDER SECTION 311 OF THE CLEAN WATER ACT. SPILLS ENTERING (A) SURFACE WATERS OR (B) ANY WATER COURSES OR SEWERS ENTERING/LEADING TO SURFACE WATERS THAT CAUSE A SHEEN MUST BE REPORTED TO THE NATIONAL RESPONSE CENTER. 800-424-8602.

## SECTION XII

## SPECIAL PRECAUTIONS

MINIMIZE SKIN CONTACT. WASH WITH SOAP AND WATER BEFORE EATING, DRINKING, SMOKING OR USING TOILET FACILITIES. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE. PROPERLY DISPOSE OF CONTAMINATED LEATHER ARTICLES, INCLUDING SHOES, THAT CANNOT BE DECONTAMINATED. STORE IN A COOL, DRY PLACE WITH ADEQUATE VENTILATION. KEEP AWAY FROM OPEN FLAMES AND HIGH TEMPERATURES.

## SECTION XIII

## TRANSPORTATION REQUIREMENTS

DEPARTMENT OF TRANSPORTATION CLASSIFICATION. NOT HAZARDOUS BY D.O.T. REGULATIONS

## SECTION XIV

## OTHER REGULATORY CONTROLS

THE COMPONENTS OF THIS PRODUCT ARE LISTED ON THE EPA TSCA INVENTORY OF CHEMICAL SUBSTANCES

TSCA - TOXIC SUBSTANCE CONTROL ACT

THE INFORMATION CONTAINED HEREIN IS BASED ON THE DATA AVAILABLE TO US AND IS BELIEVED TO BE CORRECT. HOWEVER, SHELL MAKES NO WARRANTY, EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SHELL ASSUMES NO RESPONSIBILITY FOR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

DATE PREPARED: NOVEMBER 21, 1985

JOHN P. SEPESI

BE SAFE

READ OUR PRODUCT  
SAFETY INFORMATION ...AND PASS IT ON  
(PRODUCT LIABILITY LAW  
REQUIRES IT)

SHELL OIL COMPANY  
PRODUCT SAFETY AND COMPLIANCE  
P. O. BOX 4320  
HOUSTON, TX 77210

L.T. "LEE" SAWYER, INC.  
JOBBER  
SHELL OIL & SHELL CHEMICAL PRODUCTS  
14117 Aetna St., Van Nuys, CA  
786-8180 Box 369, Van Nuys, CA 91408



NOT A COPY

MISC

# MATERIAL SAFETY DATA SHEET

MSDS NUMBER 58,100-2

PAGE

<b>24 HOUR EMERGENCY ASSISTANCE</b>		<b>GENERAL MSDS ASSISTANCE</b>	
SHELL: 713-473-9461 CHEMTREC: 800-424-9300		SHELL: 713-241-4819	
		<b>HAZARD RATING</b> ▶	
		LEAST 1 SLIGHT MODERATE 2 HIGH 3 EXTREME 4	
*For acute and chronic health effects refer to the discussion in Section II.			



<b>SECTION I</b>	<b>NAME</b>
<b>PRODUCT</b>	AEROSHELL FLUID 4
<b>CHEMICAL NAME</b>	MIXTURE (SEE SEC. II-A)
<b>CHEMICAL FAMILY</b>	PETROLEUM HYDROCARBON; AVIATION OIL EPA - AQMD.
<b>SHELL CODE</b>	60421

SECTION II-A		PRODUCT/INGREDIENT	
NO.	COMPOSITION	CAS NUMBER	PERCENT
P	AEROSHELL FLUID 4	MIXTURE	100
1	SOLVENT REFINED, HYDROTREATED, MIDDLE DISTILLATE	64742-46-7	75-80
2	SOLVENT REFINED, HYDROTREATED, HEAVY NAPHTHENIC DISTILLATE,	64742-52-5	5-10
3	POLYMERIC ADDITIVE IN OIL	MIXTURE	10-15
4	MINOR ADDITIVES	MIXTURE	<1

SECTION II-B		ACUTE TOXICITY DATA	
NO.	ACUTE ORAL LD50	ACUTE DERMAL LD50	ACUTE INHALATION LC50
P	NOT AVAILABLE		

BASED ON DATA AVAILABLE TO SHELL, COMPONENTS 3 AND 4 IN THIS PRODUCT ARE NOT HAZARDOUS UNDER OSHA HAZARD COMMUNICATION (29 CFR 1910.1200).

## SECTION III HEALTH INFORMATION

THE HEALTH EFFECTS NOTED BELOW ARE CONSISTENT WITH REQUIREMENTS UNDER THE OSHA HAZARD COMMUNICATION STANDARD (29 CFR 1910.1200).

### EYE CONTACT

LUBRICATING OILS ARE GENERALLY CONSIDERED NO MORE THAN MINIMALLY IRRITATING TO THE EYES.

### SKIN CONTACT

LUBRICATING OILS ARE GENERALLY CONSIDERED NO MORE THAN MILDLY IRRITATING TO THE SKIN. PROLONGED AND REPEATED CONTACT MAY LEAD TO VARIOUS SKIN DISORDERS SUCH AS DERMATITIS, OIL ACNE OR FOLLICULITIS.

### INHALATION

INHALATION OF VAPORS (GENERATED AT HIGH TEMPERATURES ONLY) OR OIL MIST FROM THIS PRODUCT MAY CAUSE MILD IRRITATION OF THE UPPER RESPIRATORY TRACT.

# MATERIAL SAFETY DATA SHEET

(Essentially similar to Form OSHA-20) < 1 with 29CFR 1910.1200 >

## SECTION I

CODE NUMBER: A2600

DATE 880107

TRADE NAME: MIL-H-5606E AM1 RML3 94-136

SUPERCEDES 870203

CHEMICAL FAMILY: PETROLEUM

CARCINOGENIC INGREDIENTS/OSHA/NTP/IARC: NONE

C.A.S. NO.: "MIXTURE"

TSCA INFORMATION: NOT CURRENTLY LISTED

## SECTION II — HAZARDOUS INGREDIENTS

COMPONENTS	C.A.S. NOS.	TLV/PEL PPM	mg/m <sup>3</sup>	PERCENT BY WEIGHT/VOLUME
SOLU REF PETR BASE STOCK	14713-44-2 14741-97-4 14742-33-6		5	85WT
THIS PRODUCT DEFINED AS NON-HAZARDOUS EXCEPT AS STATED ABOVE. DISCLOSURE OF INGREDIENTS AVAILABLE TO PHYSICIAN OR NURSE IN EVENT OF MEDICAL EMERGENCY.				

## SECTION III — FIRE AND EXPLOSION HAZARD DATA

HAZARDOUS THERMAL DECOMPOSITION CARBON MONOXIDE AND ASPHYXIANTS	FLAMMABLE LIMITS: LEL — UEL N/A ASTM D93(PHCC)
EXTINGUISHING MEDIA: CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATERFOG	FLASH POINT: 92 °C (182 °F)
	DOT INFORMATION: COMBUSTIBLE LIQUID, N.O.S.

UNUSUAL FIRE AND EXPLOSION HAZARDS: SLIGHTLY COMBUSTIBLE, WHEN HEATED ABOVE FLASH POINT WILL RELEASE FLAMMABLE VAPORS WHICH CAN BURN IN OPEN OR BE EXPLOSIVE IN CONFINED SPACES IF EXPOSED TO SOURCE OF IGNITION.

SPECIAL FIRE FIGHTING PROCEDURES: DO NOT ENTER ANY ENCLOSED OR CONFINED AREA WITHOUT PROPER PROTECTIVE EQUIPMENT AND SELF CONTAINED BREATHING APPARATUS.

## SECTION IV — PHYSICAL DATA

BOILING RANGE: 175 °C	SOLUBILITY: NEG	PH: N/D
VAPOR PRESSURE: <0.01mm Hg @ 20 °C	APPEARANCE AND ODOR: RED, OILY LIQUID PETROLEUM ODOR	
VAPOR DENSITY: HEAVIER THAN AIR	EVAPORATION RATE: LESS THAN ETHER	SPECIFIC GRAVITY: 0.848
		WEIGHT PER GALLON: 7.23
		% VOLATILE BY VOLUME: NIL

## SECTION V — REACTIVITY DATA

INCOMPATIBILITY < MATERIALS TO AVOID >: STRONG OXIDIZING AGENTS	
STABILITY: STABLE	CONDITIONS TO AVOID: DO NOT HEAT ABOVE FLASH POINT. 182 °C
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE AND ASPHYXIANTS	
HAZARDOUS POLYMERIZATION: NONE	OCCUPATIONAL EXPOSURE LIMIT TLV = 5mg/m <sup>3</sup> AS OIL MIST

DAY: (213) 828-3303  
EMERGENCY 24 HOURS  
CHEMTEC: 800-451-5000



MIL-H-5606E RM1 HMLS 84-135

SECTION VI — HEALTH HAZARD DATA		
ROUTE OF EXPOSURE	ADVERSE EFFECTS:	FIRST AID PROCEDURES:
	ORAL ING	DO NOT INDUCE VOMITING. CONSULT PHYSICIAN
	BREATHING INH	REMOVE FROM CONTAMINATED AREA. APPLY ARTIFICIAL RESPIRATION IF UNCONSCIOUS CONSULT PHYSICIAN
	ECYOTEN	FLUSH WITH COPIOUS AMOUNTS OF WATER. IF IRRITATION DEVELOPES CONSULT PHYSICIAN
	ASCCKO UIN TN E	WASH WITH SOAP AND WATER. CONSULT PHYSICIAN IF IRRITATION OR INFLAMMATION DEVELOPES.
	CSC HKO RIN ON N I C	WEAR PROTECTIVE CLOTHING TO AVOID SKIN CONTACT. CONSULT PHYSICIAN IF IRRITATION OR INFLAMMATION DEVELOPES.

## SECTION VII — SPILL OR LEAK PROCEDURES <EPA>

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: STOP FLOW. WIPE OR MOP UP OR ABSORB WITH DIATOMACEOUS EARTH OR OTHER INERT MATERIAL. STORE IN APPROPRIATE CONTAINER FOR DISPOSAL.

WASTE DISPOSAL METHOD:  $\frac{1}{2}$   
IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

TRANSPORTATION INFORMATION: CONSULT 49 CFR PARTS 1-300 AND REFER TO SECTION III OF THIS MSDS FOR ADDITIONAL RECOMMENDATIONS CONCERNING PLACARDING.

## SECTION VIII — SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NONE NORMALLY REQUIRED

PROTECTIVE GLOVES: RECOMMENDED

EYE PROTECTION: REQUIRED

OTHER PROTECTIVE EQUIPMENT:

CHEMICALLY RESISTANT BOOTS AND APRONS RECOMMENDED.

VENTILATION: SUFFICIENT TO MAINTAIN ATMOSPHERE BELOW TLV LIMIT

## SECTION IX — SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN WHEN HANDLING OR STORING:  
AVOID STORAGE NEAR OPEN FLAME OR OTHER SOURCES OF IGNITION.  
EXCESSIVE MISTING MAY CAUSE SLIPPERY FLOORS. PROPER FOOTWEAR REQUIRED.

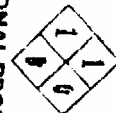
PERSONAL HYGIENE: WASH HANDS WITH SOAP AND WATER BEFORE EATING, DRINKING, OR SMOKING.

OTHER PRECAUTIONS: WASH OR TAKE SHOWER IF GENERAL CONTACT OCCURS. REMOVE OIL-SOAKED CLOTHING AND LAUNDRER BEFORE REUSE. DISCARD CONTAMINATED LEATHER GLOVES AND SHOES.

APPROVED BY: RICHARD J. EBERHARDT  
LABORATORY MANAGER

DATE: 880224

PERSONAL PROTECTION (NFPA)



HEALTH

REACTIVITY

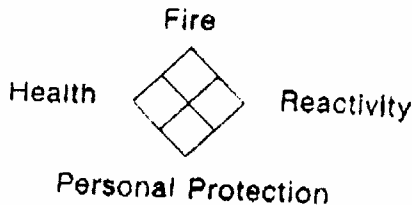
NO600

FIRE

FIRE

# DEFINITIONS

- ACGIH: American Conference of Governmental Industrial Hygienists
- DOT: Department of Transportation
- LC50: Lethal Concentration Fifty: A calculated concentration of a substance which is expected to cause death of 50% of an entire defined experimental animal population.
- LD50: Lethal Dose Fifty: A calculated dose of a substance expected to cause death of 50% of an experimental animal population.
- LEL: Lower Explosive Limit



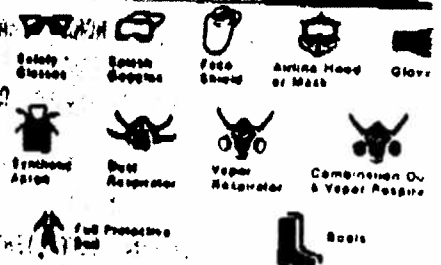
Hazard Category Scheme: This scheme rates health, fire, reactivity and special hazards on a scale of 0 to 4.

- 0 = no significant hazard  
1 = slight hazard  
2 = moderate hazard  
3 = high hazard  
4 = extreme hazard.

- PEL: Permissible Exposure Limit
- N/A: Not Applicable
- N/D: Not Determined
- NFPA: National Fire Protection Association
- TLV: Threshold Limit Value. A recommended upper limit or TWA concentration of a substance to which most workers can be exposed without adverse effect.
- TWA: Time Weighted Average
- ING: Ingestion
- INH: Inhalation
- CON: Contact

## PERSONAL PROTECTION INDEX

- A
- B +
- C + +
- D + + +
- E + + + +
- F + + + + +
- G + + + + + +
- H + + + + + + +
- I + + + + + + + +
- J + + + + + + + + +
- K + + + + + + + + + +
- X: Ask your supervisor for specialized handling directions



Lubricating Specialties Company

8015 Paramount Blvd.  
Pico Rivera, CA 90660-4888  
Telephone (213) 928-3311

MONSANTO PRODUCT NAME

**SKYDROL® 500B-4 FIRE  
RESISTANT HYDRAULIC FLUID**

MONSANTO COMPANY  
800 N. LINDBERGH BLVD.  
ST. LOUIS, MO 63167

**Emergency Phone No.**  
**(Call Collect)**  
**314-694-1000**

## PRODUCT IDENTIFICATION

SKYDROL® 500B-4 fire resistant hydraulic fluid is a proprietary product. The formulation is a trade secret of Monsanto Company. See the section on OCCUPATIONAL CONTROL PROCEDURES for the identity of two components regulated by a standard of the Occupational Safety and Health Administration (OSHA). All components of SKYDROL 500B-4 fluid appear on the Inventory of Chemical Substances published by the U.S. Environmental Protection Agency (EPA).

**Chemical Family:** Phosphate esters with performance additives.

**DOT Hazard Class:** This product is not classified as a hazardous material by the U.S. Department of Transportation.

**Label Requirement:** Product Label

**Reportable Quantity (RQ)  
Under U.S. Clean Water  
Act Regulations:** Not Listed

**U.S. Surface Freight  
Classification:** Hydraulic System Fluid, Other Than Petroleum

## WARNING STATEMENTS

CAUTION:  
MAY CAUSE IRRITATION TO EYES, SKIN AND RESPIRATORY TRACT

## PRECAUTIONARY MEASURES

Avoid prolonged or repeated skin contact. Wear impervious gloves of n butyl nitrile rubber.

Do not get in eyes. Wear chemical safety goggles.

Avoid breathing mist or vapor. Wear a NIOSH approved respirator when mist or vapor is possible.

Emptied container retains vapor and product residue. Observe all labeled safeguards until container is destroyed. DO NOT REUSE CONTAINER.

## EMERGENCY AND FIRST AID PROCEDURES

FIRST AID: IF IN EYES, immediately flush with plenty of water for at least 15 minutes. Call a physician.

IF ON SKIN, immediately wash with soap and plenty of water. Remove contaminated clothing. Wash clothing before reuse.

## OCCUPATIONAL CONTROL PROCEDURES

**Eye Protection:** Wear chemical safety goggles to prevent eye contact.

**Skin Protection:** Wear appropriate impervious gloves and protective clothing to prevent skin contact. Wear face shields and aprons when splashing is likely. Launder contaminated clothing and clean protective equipment before re-use.

(Occupational Control Procedures Continued On Next Page)

MATERIAL SAFETY DATA

SKYDROL® 500B-4 Fluid

**UNIFORM HAZARDOUS  
WASTE MANIFEST**

1. Generator's US EPA ID No.

CA12101016141217

Manifest  
Document No.

2. Page 1  
of

Information in the shaded areas  
is not required by Federal  
law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
1010 GREENSBAY  
N 74000000

4. Generator's Phone ( ) 212 1875-2150

5. Transporter 1 Company Name

KING KONG DRAIN OIL

6. US EPA ID Number

CA1017121142131210

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

REL 1835 E. 243ST  
SILVER HILL CA

10. US EPA ID Number

CA1018101011101517

A. State Manifest Document Number

86132974

B. State Generator's ID

CA10981423320

C. State Transporter's ID

D. Transporter's Phone ( ) 212 1875-2150

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CA1080011057

H. Facility's Phone

212 575-6577

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total  
Quantity

14. Unit  
Wt/Vol

15. Waste No.

a. WASTE OIL & WATER NOS NA1270

1011 TIT 10131510 G

b. COMBUSTIBLE LIQUID

c.

d.

J. Additional Descriptions for Materials Listed Above

WASTE OIL  
WATER

K. Handling Codes for Wastes Listed Above

R.O.I.

15. Special Handling Instructions and Additional Information

NEED GLOVES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name

LEWIS AUGUSTINE

Signature

*Leuis Augustine*

Month Day Year

10/4/2017

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

JOHN J. CHEN (A) 1012

Signature

*John J. Chen*

Month Day Year

10/4/2017

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

10/4/2017

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

VIC TRIPPE

Signature

*Vic Trippe*

Month Day Year

10/4/2017

86132974

GENERATOR

TRANSPORTER

FACILITY

UNIFORM HAZARDOUS  
WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest

2. Page 1  
of 1Information in the shaded areas  
is not required by Federal  
law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES Return To Generator  
11310 Sherman Way  
Sun Valley, CA, 213 875-2930

5. Transporter 1 Company Name

CHEM-RAN PUMPING SERVICES, INC. CA 9 8 07 36 4 25

7. Transporter 2 Company Name

9. Designated Facility Name and Site Address

CASMALIA RESOURCES  
NTU ROAD  
CASMALIA, CA

10. US EPA ID Number

CA 0 20 7 48 1 25

A. State Manifest Document Number

86126098

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone 213 291-0508

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone 805 937-8449

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. WASTE POISONOUS SOLID, N.O.S., POISON UN 02811

12. Containers

No.

Type

13. Total Quantity

14. Unit WWVol

15. Waste No.

008

DM

01600

P

181

J. Additional Descriptions for Materials Listed Above

Nickel Chloride 20X  
Cyanide 2X  
Absorbent 78X

K. Handling Codes for Wastes Listed Above

03/F009

15. Special Handling Instructions and Additional Information

Gloves

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name

LEW AUGUSTINE

Signature

Month Day Year

01/24/87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

RUDY GILLIAM, DRIVER

Signature

Month Day Year

10/23/87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Dennis Fraley

Signature

Month Day Year

10/23/87

86126098

GENERATOR

TRANSPORTER

FACILITY



**UNIFORM HAZARDOUS  
WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of

Information in the shaded areas  
is not required by Federal  
law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( ) -

5. Transporter 1 Company Name

6. US EPA ID Number

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

A. State Manifest Document Number

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone ( ) -

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total  
Quantity

14. Unit  
Wt/Vol

15. Waste No.

a. WASTE OIL / WATER COS. NO. 1270

b. CONTAINER

c.

d.

J. Additional Descriptions for Materials Listed Above

WASTE OIL

WATER

K. Handling Codes for Wastes Listed Above

R.O.I

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I deem to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name

Signature

Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year

**UNIFORM HAZARDOUS  
 WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest  
 Document No.

2. Page 1  
 of

Information in the shaded areas  
 is not required by Federal  
 law.

3. Generator's Name and Mailing Address

UNIVERSITY SERVICES  
 1555 ECHINAW WAY  
 VALLEJO CA 94592

4. Generator's Phone (212) 875-2470

5. Transporter 1 Company Name

KINK + KINK DRAIN OIL

6. US EPA ID Number

CAD91142F 2E

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

111 1275 19TH ST

SUNOL HILL CA.

10. US EPA ID Number

164T090011059

A. State Manifest Document Number

86132972

B. State Generator's ID

CAD91142F 2E

C. State Transporter's ID

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

164T090011059

H. Facility's Phone

212-875-2470

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. WASTE OIL 4F5 NA. 1270  
 COMBUSTIBLE LIQUID

12. Containers

No. Type

13. Total  
 Quantity

14. Unit  
 Wt/Vol

001 RT00600 G

b.

c.

d.

J. Additional Descriptions for Materials Listed Above

WASTE OIL  
 WATER

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

RUBBER GLOVES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name

LEWIS E. AUGUSTINE

Signature

[Signature]

Month Day Year

10/4/87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

KENNETH T. KING

Signature

[Signature]

Month Day Year

10/4/87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

Sh Waste Oil 40%  
 H2O 10%

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

[Signature]

Signature

[Signature]

Month Day Year

10/4/87

86132972

GENERATOR

TRANSPORTER

FACILITY

**UNIFORM HAZARDOUS  
WASTE MANIFEST**

1. Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1

Information in the shaded areas  
is not required by Federal  
law.

Generator's Name and Mailing Address

FRIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY.  
SUN VALLEY CA 91352

4. Generator's Phone ( ) 775-1130

A. State Manifest Document Number

06132975

B. State Generator's ID

CAD00046257

C. State Transporter's ID

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CAD00034492

H. Facility's Phone

213-776-6777

5. Transporter 1 Company Name

6. US EPA ID Number

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

455 IUC AVE  
SUN VALLEY CA 91352

K14101C181264412

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total Quantity

14. Unit Wt/Vol

a. 111, TRICHLOROETHANE

b. 111, TRICHLOROETHANE

c.

d.

J. Additional Descriptions for Materials Listed Above

111, TRICHLOROETHANE - 90%  
OIL - 10%

K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name

Signature

Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year



**UNIFORM HAZARDOUS WASTE MANIFEST**

Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of 1

Information is not required

3. Generator's Name and Mailing Address

Flight Accessory Services 91352  
11310 Sherman Way  
Sun Valley, Ca. 213-875-2930

A. State Manifest Document Number

87185543

B. State Generator's ID

EXEMPT

C. State Transporter's ID

709055

D. Transporter's Phone

213-291-4508

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CAD 1012107

H. Facility's Phone

805-937-8449

5. Transporter 1 Company Name

Chem-Ran Pumping Services In CAD 980 736 425

6.

US EPA ID Number

7. Transporter 2 Company Name

8.

US EPA ID Number

9. Designated Facility Name and Site Address

Casmalia Resources Inc  
NIO Road  
Casmalia, Ca

10.

US EPA ID Number

CAD 020748125

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

HAZARDOUS WASTE SOLID, N.O.S., ORM-E, NA9189

12. Containers  
No. Type

0016 DM 01007

13. Total Quantity

1000

14. Unit  
Wt/Vol

P

**GENERATOR COPY**  
Return To Generator

J. Additional Descriptions for Materials Listed Above

Nickel Chloride 25 %  
Absorbant 75 %

K. Handling Codes for Waste

15. Special Handling Instructions and Additional Information

Wear appropriate safety attire

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

Lew Augustine

Signature

*Lew Augustine*

Month Day Year

07 09 87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Joe Davidson

Signature

*Joe Davidson*

Month Day Year

07 09 87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

# 93496

Signature

*Quincy Blaine Judy Blaine*

Month Day Year

12 12 87

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY



DHS 8022 A (11/85)  
(EPA 8700-22)

YELLOW: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS



(Form designed for use on (12-pitch) typewriter.)

**FORM HAZARDOUS  
WASTE MANIFEST**1. Generator's US EPA ID No.  
CAD000646257Manifest  
Document No.2. Page 1  
ofInformation in the shaded areas  
is not required by Federal  
law.

Generator's Name and Mailing Address

**WRIGHT ACCESSORY SERVICES****11310 SHERMAN WAY, SUN VALLEY CA 91352**

4. Generator's Phone ( 213 ) 875-2930

5. Transporter 1 Company Name

**KING & KING DRAIN OIL**

6. US EPA ID Number

**CAD981423320**

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

**P.R.I. 1835 E. 29th. STREET  
SIGNAL HILL CA.**

10. US EPA ID Number

**CAT080011059**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
No. Type13. Total  
Quantity14. Unit  
Wt/Vola. **WASTE OIL & WATER NOS NA 1270****001****TT****900****G**

b.

c.

d.

J. Additional Descriptions for Materials Listed Above

**WASTE OIL & WATER**

15. Special Handling Instructions and Additional Information

**RUBBER GLOVES - SAFETY GLASSES**16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name

**STAN G. LA SALLE**

Signature

*Stan G. La Salle*

Date

Month Day Year  
**8 28 87**

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year  
**8 28 87**

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year  
**8 28 87**

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Date

Month Day Year  
**8 28 87**

84610020

GENERATOR

TRANSPORTER

FACILITY

Designed for use on elite (12-pitch) typewriter.)

**HAZARDOUS  
WASTE MANIFEST**

1. Generator's US EPA ID No.  
C.A.D. 0.0.0. 6.4.6257

Manifest  
Document No.

2. Page 1  
of

Information in the shaded areas  
is not required by Federal  
law.

Name and Mailing Address

**ACCESSORY SERVICES**

**1810 SHERMAN WAY, SUN VALLEY CA 91352**

Generator's Phone. (213) 875-2930

Transporter 1 Company Name  
**KING & KING DRAIN OIL**

6. US EPA ID Number  
CAD981423320

Transporter 2 Company Name

8. US EPA ID Number

Designated Facility Name and Site Address  
**P.R.I. 1835 E. 29th. STREET  
SIGNAL HILL CA**

10. US EPA ID Number  
CAT080011059

1. Generator's US EPA ID No.  
84610019

2. Generator's Name  
KING & KING DRAIN OIL

3. Generator's Address  
1810 SHERMAN WAY, SUN VALLEY CA 91352

4. Generator's Phone  
(213) 875-2930

5. Generator's EPA ID No.  
C.A.D. 0.0.0. 6.4.6257

6. Generator's Name  
P.R.I. 1835 E. 29th. STREET

7. Generator's Address  
SIGNAL HILL CA

8. Generator's Phone  
(213) 875-2930

9. Generator's EPA ID No.  
CAT080011059

10. Generator's Name  
KING & KING DRAIN OIL

11. Generator's Address  
1810 SHERMAN WAY, SUN VALLEY CA 91352

12. Generator's Phone  
(213) 875-2930

13. Generator's EPA ID No.  
C.A.D. 0.0.0. 6.4.6257

14. Generator's Name  
P.R.I. 1835 E. 29th. STREET

15. Generator's Address  
SIGNAL HILL CA

16. Generator's Phone  
(213) 875-2930

17. Generator's EPA ID No.  
CAT080011059

18. Generator's Name  
KING & KING DRAIN OIL

19. Generator's Address  
1810 SHERMAN WAY, SUN VALLEY CA 91352

20. Generator's Phone  
(213) 875-2930

21. Generator's EPA ID No.  
C.A.D. 0.0.0. 6.4.6257

22. Generator's Name  
P.R.I. 1835 E. 29th. STREET

23. Generator's Address  
SIGNAL HILL CA

24. Generator's Phone  
(213) 875-2930

25. Generator's EPA ID No.  
CAT080011059

26. Generator's Name  
KING & KING DRAIN OIL

27. Generator's Address  
1810 SHERMAN WAY, SUN VALLEY CA 91352

28. Generator's Phone  
(213) 875-2930

29. Generator's EPA ID No.  
C.A.D. 0.0.0. 6.4.6257

30. Generator's Name  
P.R.I. 1835 E. 29th. STREET

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. **WASTE OIL & WATER NOS NA 1270**

b.

c.

d.

Additional Descriptions for Materials Shipped

**WASTE OIL & WATER**

15. Special Handling Instructions and Additional Information

**RUBBER GLOVES - SAFETY GLASSES**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable International and national governmental regulations.

Printed/Typed Name  
**STAN G. LA SALLE**

Signature

*Stanley G. La Salle*

Date  
Month Day Year  
8 20 87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

*CONCEPCION CARRERA*

*Concepcion Carrera*

Date  
Month Day Year  
8 20 87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Date  
Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

*P.R.I. 1835 E. 29th. STREET  
SIGNAL HILL CA  
JIP TRIPPLE*

Date  
Month Day Year  
8 20 87

84610019

GENERATOR

TRANSPORTER

FACILITY

Form designed for use on a

(pitch) typewriter.)

**HAZARDOUS  
WASTE MANIFEST**

Generator's US EPA ID No.

Manifest  
Document No.

Page 1  
of

Information in the shaded areas  
is not required by Federal  
law.

Generator's Name and Mailing Address

WRIGHT ACCESSORY SERVICES  
11810 SHERMAN WAY SUN VALLEY CA

A. State Manifest Document Number

86132976

B. State Generator's ID

Generator's Phone (213) 875-2430

6. Transporter 1 Company Name

KING & KING DRILLING

8. US EPA ID Number

CA01954331210

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

DRILLING E. 24 ST  
SIGNAL HILL CA

10. US EPA ID Number

CA0104611111111

C. State Transporter's ID

54200

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CA01080011059

H. Facility's Phone

595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. WASTE OIL & WATER NOS NA1270  
COMBUSTIBLE LIQUID

12. Containers

No.

Type

13. Total Quantity

14. Unit Wt/Vol

Waste No.

0101

TIT

001800

G

221

J. Additional Descriptions for Materials Listed Above

WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above

P.O.I.

15. Special Handling Instructions and Additional Information

WEARER GLOVES & SAFETY GLASSES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

Unless I am a small quantity generator who has been exempted by statute or regulation from the duty to make a waste minimization certification under Section 3002(b) of RCRA, I also certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment.

Printed/Typed Name

S. G. LA SALLE

Signature

Stanley G. La Salle

Month Day Year

11/16/87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

KENNETH T. KING

Signature

Kenneth T. King

Month Day Year

11/16/87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

11/16/87

19. Discrepancy Indication Space

T. NO  
H2O

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

VIP TRIPPE

Signature

VIP Trippe

Month Day Year

11/16/87

0167CTNO





UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of 1

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY, SUN VALLEY CA

4. Generator's Phone (213) 847-2930 91352

5. Transporter 1 Company Name

KING & KING DRAIN OIL

6. US EPA ID Number

CAD 981423320

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

P.R.I. 1835 E. 29 ST  
SIGNAL HILL CA

10. US EPA ID Number

CAT080011059

A. State Manifest Document Number

87646448

B. State Generator's ID

CAD1000646257

C. State Transporter's ID

54200

D. Transporter's Phone (213) 409-8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CAT080011059

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. WASTE WATER & OIL

12. Containers

No. Type

001 TT

13. Total Quantity

1150 G

14. Unit

Wt/Vol

6

Waste No.

221

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

a. R01

15. Special Handling Instructions and Additional Information

RUBBER GLOVES - SAFETY GLASSES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

STANLEY G. LA SALLE

Signature

Stanley G. La Salle

Month Day Year

11/01/98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

KENNETH T. KING

Signature

Kenneth T. King

Month Day Year

11/01/98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

VIC TRIPPE

Signature

Vic Trippe

Month Day Year

11/01/98



UNIFORM HAZARDOUS  
WASTE MANIFEST.

Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of

Information in the shaded areas  
is not required by Federal law.

CA D000646257

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY SUN VALLEY CA

4. Generator's Phone (213) 875 2930 91352

5. Transporter 1 Company Name

KING & KING DRAIN OIL CA D981 423320

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

P.R.1 1835 E.29 ST,  
SIGNAL HILL, CA.

10. US EPA ID Number

CA T980011059

A. State Manifest Document Number

87646449

B. State Generator's ID

CA D000646257

C. State Transporter's ID 54200

D. Transporter's Phone 213-889-8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CA T980011059

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
No. Type

13. Total  
Quantity

14. Unit  
Wt/Vol

L  
Waste No.

a. WASTE WATER & OIL

001 TT

0.1275

G State 221

EPA/Other

b.

State

EPA/Other

c.

State

EPA/Other

d.

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

a. RO1

c.

d.

15. Special Handling Instructions and Additional Information

RUBBER GLOVES - SAFETY GLASSES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

STANLEY G. LA SALLE

Signature

Stanley G. La Salle

Month Day Year

11/1/87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

KENNETH T. KING

Signature

Kenneth T. King

Month Day Year

11/1/87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

11/1/87

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

VIC TRIPPE

Signature

Vic Tripp

Month Day Year

11/1/87

h typewriter).

erator's US EPA ID No.

Manifest  
Document No.

Page 1  
of 1

Information in the shaded areas  
is not required by Federal law.

# UNIFORM HAZARDOUS WASTE MANIFEST

CA D00096462579493

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY, SUN VALLEY, CA,

4. Generator's Phone (213) 875 2930 91252

5. Transporter 1 Company Name

KNO-CHEM CORP

6.

US EPA ID Number

CA D0008364432

7. Transporter 2 Company Name

8.

US EPA ID Number

9. Designated Facility Name and Site Address

RHO CHEM  
425 1514 AVE  
INGLEWOOD CA 90301

10.

US EPA ID Number

CA D0008364432

A. State Manifest Document Number

87646451

B. State Generator's ID

HAIHQ36022066

C. State Transporter's ID

7795

D. Transporter's Phone

776-6253

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CA D0008364432 1

H. Facility's Phone

213-776-6253

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

WASTE ORN-A LIQUID N.O.S.  
NA-1693 RQ 1000/454

12. Containers

No.

Type

0139M

13. Total Quantity

Unit

Wt/Vol

11510 G

14.

Unit

Wt/Vol

G

I. Waste No.

State

211

EPA/Other

F-001

J. Additional Descriptions for Materials Listed Above

1,1,1, TRICHLOROETHANE - 90%  
OIL 10%

K. Handling Codes for Wastes Listed Above

a. 01

c.

d.

15. Special Handling Instructions and Additional Information

GLOVES & GOGGLES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

STANLEY G. LA SALLE

Signature

Stanley G. La Salle

Month Day Year

11/1/87

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

GERALD RIES

Signature

Gerald Ries (3) #46450

Month Day Year

11/1/87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Cosme Cerritos

Signature

Cosme Cerritos

Month Day Year

11/1/87

Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY, SUN VALLEY, CA

4. Generator's Phone (213) 875 2930 91352

5. Transporter 1 Company Name 6. US EPA ID Number

KING & KING DRAIN OIL CAD9811423320

7. Transporter 2 Company Name 8. US EPA ID Number

9. Designated Facility Name and Site Address 10. US EPA ID Number

P.R.I. 1835 E. 29 ST  
SIGNAL HILL, CA. ICAT080011059

A. State Manifest Document Number

87646452

B. State Generator's ID

HAHQ36022066

C. State Transporter's ID 54200

D. Transporter's Phone 213 439 8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CHT080011059

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
No. Type

13. Total Quantity

14. Unit  
Wt/Vol

15. Waste No.

a. WASTE WATER & OIL N.O.S.

001 TT

9

1221

NA. 1270 COMBUSTIBLE LIQUID

11

99800

State  
EPA/Other

b.

11

11

State  
EPA/Other

c.

11

11

State  
EPA/Other

d.

11

11

State  
EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

a. R01

c.

d.

15. Special Handling Instructions and Additional Information

RUBBER GLOVES - SAFETY GLASSES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

STANLEY G. LASALLE

Signature

Stanley G. La Salle 11/24/88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

KENNETH T. KING

Signature

Kenneth T. King 11/24/88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

VIP TRIPPE

Signature

Month Day Year 11/24/88

1988

Health and Welfare Agency  
EPA 800-0039 (Expires 9-30-88)  
(Form designed for use on elite (12) typewriter).

**UNIFORM HAZARDOUS  
WASTE MANIFEST**

Generator's US EPA ID No.

Manifest  
Document No.

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY, SUN VALLEY CA  
91352

4. Generator's Phone (213) 875 2930

5. Transporter 1 Company Name

KING & KING DRAINAGE

7. Transporter 2 Company Name

9. Designated Facility Name and Site Address

P.R.I. 1835 E. 29 ST.  
SIGNAL HILL, CA

6. US EPA ID Number

8. US EPA ID Number

10. US EPA ID Number

A. State Manifest Document Number

87646456

B. State Generator's ID

HAHQ36022066

C. State Transporter's ID

54200

D. Transporter's Phone

213 439 8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

11111111111111111111

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. WASTE WATER & OIL

12. Containers

No. Type

001 TT

13. Total Quantity

99505

14. Unit Wt/Vol

G

I. Waste No.

State 221

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above

a. R01

15. Special Handling Instructions and Additional Information

RUBBER GLOVES, SAFETY GLASSES.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

STANLEY G. LASALLE

Signature

Stanley G. La Salle 12/11/88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

KENNETH T. KING

Signature

Kenneth T. King 12/11/88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

WILL TRIPPLE

Signature

Will Triple 11/11/88

**UNIFORM HAZARDOUS  
WASTE MANIFEST**

Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICE  
11310 SHERMAN WAY SUN VALLEY CAL.

A. State Manifest Document Number

88076221

4. Generator's Phone (611) 745-6201

91732

B. State Generator's ID

H AH936022066

5. Transporter 1 Company Name

KING + KING OIL

6. US EPA ID Number

CA0981423320

C. State Transporter's ID

CH200

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone

213-439-8500

9. Designated Facility Name and Site Address

KRI, 1835 E 29TH ST

10. US EPA ID Number

SIGNAL HILL. CAL.

CA080011059

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

13. Total Quantity

14. Unit Wt/Vol

15. Waste No.

a. COMBUSTABLE LIQUID

WASTE OIL + WATER NOS NA 1270

0101 TT

11300 G

State 221

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

WASTE OIL - WATER

K. Handling Codes for Wastes Listed Above

201

15. Special Handling Instructions and Additional Information

RUBBER GLOVES + SAFETY GLASSES.

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

ERIK JOHNSON

Signature

Erik Johnson

Month Day Year

10/25/88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

JOSEPH GARRERA

Signature

Joseph Garrera

Month Day Year

10/25/88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Luis PAZ

Signature

Luis Paz

Month Day Year

11/02/88

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

**HAZARDOUS  
WASTE MANIFEST**

(Type in typewriter)

Generator's US EPA ID No.

Manifest Document No.

Page 1  
of

Information in the shaded areas  
is not required by Federal law.

Generator's Name and Mailing Address

**FLIGHT ACCESSORY SERVICES**  
11310 SHERMAN WAY, SUN VALLEY CA  
91352  
4. Generator's Phone (213) 875-2930

5. Transporter 1 Company Name

**KING & KING DRAIN OIL** 6. US EPA ID Number  
CAID9811423320

7. Transporter 2 Company Name

9. Designated Facility Name and Site Address

**PRI 1835 E. 29 ST.**  
**SIGNAL HILL CA**

10. US EPA ID Number

CAID089011059

A. State Manifest Document Number

**87646457**

B. State Generator's ID

**HAHQ36022066**

C. State Transporter's ID

**54200**

D. Transporter's Phone

**213 439 8500**

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

**CAID0810211059**

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No. Type

13. Total Quantity

14. Unit Wt/Vol

I. Waste No.

a. **WASTE WATER & OIL**

991 TT00870 G

State

**221**

EPA/Other

b. State

EPA/Other

c. State

EPA/Other

d. State

EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

a. **P07** b. c. d.

15. Special Handling Instructions and Additional Information

**RUBBER GLOVES, SAFETY GLASSES**

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

**STANLEY G. LA SALLE**

Signature

*Stanley G. La Salle*

Month Day Year

**10/12/88**

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

**IGNACIO CARPERA**

Signature

*Ignacio Carpera*

Month Day Year

**10/12/88**

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

**VIC TRIPPLE**

Signature

*Vic Tripple*

Month Day Year

**11/1/88**



<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. 61400020-442579		Manifest Document No. 11111111111111111111		2. Page 1 of 5		Information in the shaded area is not required by Federal law.					
3. Generator's Name and Mailing Address <b>Flight Accessory Services</b> <b>11310 Sherman Way, Sun Valley, CA 91352</b> 4. Generator's Phone (818) 765-6201						A. State Manifest Document Number <b>88076222</b>							
5. Transporter 1 Company Name <b>Disposal Control</b>						B. State Generator's ID <b>MAH036022066</b>							
6. US EPA ID Number <b>CA700600311264</b>						C. State Transporter's ID <b>7008</b>							
7. Transporter 2 Company Name						D. Transporter's Phone <b>800-824-3345</b>							
8. US EPA ID Number						E. State Transporter's ID							
9. Designated Facility Name and Site Address <b>Kettleman Hills Facility</b> <b>35251 Skyline Rd.</b> <b>Kettleman Hill City, CA</b>						F. Transporter's Phone							
10. US EPA ID Number <b>CA700600311264</b>						G. State Facility's ID <b>1270000441171</b>							
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers No. Type		13. Total Quantity		14. Unit Wt/Vol		1. Waste No.	
a. <b>Hazardous Waste Solid R.Q.</b> <b>NOS-ORM-E-NA 9189</b>						11		1		1		State <b>181</b> EPA/Other <b>7008/DO06</b>	
b. <b>Hazardous Waste Solid R.Q.</b> <b>NOS-ORM-E-NA 9189</b>						11		1		1		State <b>181</b> EPA/Other <b>7008/DO06</b>	
c. <b>Hazardous Waste Solid R.Q.</b> <b>NOS-ORM-E-NA 9189</b>						11		1		1		State <b>181</b> EPA/Other <b>7008/DO06</b>	
d. <b>Hazardous Waste Solid R.Q.</b> <b>NOS-ORM-E-NA 9189</b>						11		1		1		State <b>181</b> EPA/Other <b>7008/DO06</b>	
J. Additional Descriptions for Materials Listed Above A) See Profile K-65268 B) See Profile J-15003 C) See Profile J-15004 D) See Profile J-15002						K. Handling Codes for Wastes Listed Above a. b. c. d.							
15. Special Handling Instructions and Additional Information <b>Gloves, Goggles</b>													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name <b>Erik Johnson</b>						Signature <i>Erik Johnson</i>						Month Day Year <b>11 15 2011</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <b>M. L. P. H. M. L.</b>													
Signature <i>M. L. P. H. M. L.</i>						Month Day Year <b>11 15 2011</b>							
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name													
Signature						Month Day Year							
19. Discrepancy Indication Space <b>11 A Reject 1dm 11C REJECT 10dm</b> <b>11 B Reject 1dm</b>													
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name													
Signature						Month Day Year							

**UNIFORM HAZARDOUS  
WASTE MANIFEST**

Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY SUNVALLEY CA  
91352

4. Generator's Phone (213) 875-2930

5. Transporter 1 Company Name

KING & KING DRAIN OIL

6.

US EPA ID Number

CAD981423320

7. Transporter 2 Company Name

8.

US EPA ID Number

9. Designated Facility Name and Site Address

PRI. 1835 E. 29 ST.

SIGNAL HILL CA

10.

US EPA ID Number

CAT080011059

A. State Manifest Document Number

87646461

B. State Generator's ID

HA4936022066

C. State Transporter's ID

CA200

D. Transporter's Phone

213 479 8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CAT080011059

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
No. Type

13. Total  
Quantity

14. Unit  
Wt/Vol

1. Waste No.

a. WASTE WATER AND OIL NOS NA.  
1270 COMBUSTABLE LIQUID

901 T 10,135.0 G

State  
221  
EPA/Other

b.

State  
EPA/Other

c.

State  
EPA/Other

d.

State  
EPA/Other

J. Additional Descriptions for Materials Listed Above

WASTE OIL AND WATER

K. Handling Codes for Wastes Listed Above

a. RO1

b.

c.

15. Special Handling Instructions and Additional Information

RUBER GLOVES, SAFETY GLASSES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

FRANK RAGER

Signature

Frank Rager

Month Day Year

10/31/97

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

CONCEPCION CARERA

Signature

Concepcion Carera

Month Day Year

10/31/97

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

W E TRIPLE

Signature

W E Triple

Month Day Year

1/3/98



IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA CALL 1-800-852-7329

# UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest Document

CAD0000646257042118

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY, SUN VALLEY CALIF. 91352

4. Generator's Phone (818) 765-4201

5. Transporter 1 Company Name

RHO-CHEM CORP.

6. US EPA ID Number

CAD0008364432

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

RHO-CHEM CORP.  
425 ISIS AVE. INGLEWOOD, CALIF. 90301

10. US EPA ID Number

CAD0008364432

2. Page 1 of 1

Information is not required by 40 CFR 263.10

A. State Manifest Document Number

87758182

B. State Generator's ID

HAHQ36022066

C. State Transporter's ID

213-776-6233

D. Transporter's Phone

213-776-6233

E. State Transporter's ID

CAD0008364432

F. Transporter's Phone

213-776-6233

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
No. Type

13. Total Quantity

14. Unit  
Wt/Vol

15. Waste No.

a. WASTE ORM-A LIQUID NOS-NA-1693

107 DIM

1350

6

211

b.

c.

d.

12. Additional Descriptions for Materials Listed Above

TRI 1,1,1 - WATER + METAL FINES  
80% TRI III 1% METAL FINES  
19% WATER

13. Handling Codes for Wastes Listed Above

01

15. Special Handling Instructions and Additional Information

ARRON, GLOVES, GOGGLES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

ERIK JOHNSON

Signature

*Erik Johnson*

Month Day Year

10/1/88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

GERALD RIES

Signature

*Gerald Ries*

Month Day Year

10/1/88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Cosme Cerritos

Signature

*Cosme Cerritos*

Month Day Year

10/1/88

OMB 0023-A (1/87)

EPA 8700-22

(Rev. 9-88) Previous editions are obsolete.

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

# UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest Document No.

2. Page # of

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY, SUN VALLEY CA. 91352

4. Generator's Phone (213) 875-2930

5. Transporter 1 Company Name

KING + KING OIL

6. US EPA ID Number

ICIAID19111412131210

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

P.R.I., 1835 E. 29 ST.  
SIGNAL HILL, CA.

10. US EPA ID Number

ICIAIT018101111059

A. State Manifest Document Number

87646460

B. State Generator's ID

H1A1H103161022044

C. State Transporter's ID

54200

D. Transporter's Phone

213-439-8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CAT1080011059

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. COMBUSTIBLE LIQUID

WASTE OIL + WATER NOS. H.A. 1270

12. Containers

No.

Type

13. Total Quantity

14. Unit

Wt/Vol

Waste No.

221

c.

d.

J. Additional Descriptions for Materials Listed Above

RUBBER GLOVES + SAFETY GLASSES

K. Handling Codes for Wastes Listed Above

R01

15. Special Handling Instructions and Additional Information

RUBBER GLOVES + SAFETY GLASSES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

ERIK K JOHNSON

Signature

Erik K Johnson

Month Day Year

10 4 27 88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. Carretero

Signature

J. Carretero

Month Day Year

10 4 07 88

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

VIP TRIPPE

Signature

VIP Tripp

Month Day Year

10 4 17 88

# UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.

Page 1  
of

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY, SUN VALLEY CAL. 91352

4. Generator's Phone (818) 765-6201

5. Transporter 1 Company Name

KING & KING DRAIN OIL

7. Transporter 2 Company Name

9. Designated Facility Name and Site Address

P.R.I. 1835 E. 29TH ST.  
SIGNAL HILL CA

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. WASTE OIL NOS. N.A. 1270  
COMBUSTIBLE LIQUID

b.

c.

d.

J. Additional Descriptions for Materials Listed Above

WASTE OIL + WATER

15. Special Handling Instructions and Additional Information

RUBBER GLOVES, SAFETY GLASSES

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
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Printed/Typed Name

ERIK JOHNSON

Signature

*Erik Johnson*

Month Day Year

10/4/25/88

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. JOHNSON

Signature

*J. Johnson*

Month Day Year

10/4/25/88

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

VIC TRIPPE

Signature

*Vic Trippe*

Month Day Year

10/4/25/88

Please print or type. (Form designed for use on elite (12 pin typewriter).

Generator's US EPA ID No.

Manifest Document No.

Page 1

Information in the shaded areas is not required by Federal law.

## UNIFORM HAZARDOUS WASTE MANIFEST

3. Generator's Name and Mailing Address  
**FLIGHT ACCESSORY SERVICE**  
**11310 SHERMAN WAY, SUN VALLEY, CALIF**

4. Generator's Phone **818-765-3201**

5. Transporter 1 Company Name **DISPOSAL CONTROL**

7. Transporter 2 Company Name

9. Designated Facility Name and Site Address  
**CASMAIA RESOURCE MANAGEMENT**  
**NTU ROAD**

**CASMAIA, CA 93429**

A. State Manifest Document Number  
**87646475**

B. State Generator's ID  
**HIAHQ36022016161**

C. State Transporter's ID **809985**

D. Transporter's Phone **800-824-3345**

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone **1-805-937-8449**

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. **HAZARDOUS WASTE SOLID**  
**NOS-ORM-E, N.A. 9189**

12. Containers	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
No. Type			
0103 DM	1111	Y	State 352 EPA/Other N/A State
			EPA/Other
			State
			EPA/Other
			State
			EPA/Other

J. Additional Descriptions for Materials Listed Above

**CHLORINATED SOLVENTS - 3.999.61 PPM.**  
**OIL + GREASE - 5.09 mg/kg.**

K. Handling Codes for Wastes Listed Above

a. **63**

15. Special Handling Instructions and Additional Information

**RUBBER GLOVES, SAFETY GLASSES**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Signature

Month Day Year

**ERIK JOHNSON**

*Erik Johnson*

**10/12/88**

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

**Jimmy Lizards**

*Jimmy Lizards*

**10/12/88**

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

**Casnia Resources**

*Gennis Fraley*

INSTRUCTIONS ON THE BACK

DHS 8022-A (Rev. 9-86)

EPA 8700-22

(Rev. 9-86) Previous editions are obsolete.

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

Manifest  
Document No.

2. Page 1  
/ of /

Information in the shaded areas  
is not required by Federal law.

NECESSARY SERVICE  
SHERMAN WAY, SUN VALLEY, CA 91352  
Generator's Phone (818) 745-6201

A. State Manifest Document Number

87646464

B. State Generator's ID

H 1 A H 0 3 6 0 2 2 0 6 6

C. State Transporter's ID

809931

D. Transporter's Phone

1-800-824-3345

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

C 1 1 0 8 0 0 1 3 3 1 1

H. Facility's Phone

1-213-537-7100

5. Transporter 1 Company Name

DISPOSAL CONTROL

6. US EPA ID Number

1 C 1 A T 1 0 1 0 1 0 1 3 1 1 1 8 1 4

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

DE MENNO-KERDOON  
2000 N. ALAMEDA ST.

10. US EPA ID Number

COMPTON, CALIF. 90222

1 C 1 A T 1 0 1 0 1 0 1 3 3 1 5 1 2

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total Quantity

14. Unit, Wt/Vol

a. HAZARDOUS WASTE LIQUID NOS  
ORM-E N.A. 9189

001 TT 01500

b.

c.

d.

J. Additional Descriptions for Materials Listed Above

WASTE OIL - WATER SOLUBLE OIL

K. Handling Code

a.

b.

c.

d.

15. Special Handling Instructions and Additional Information

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by air, rail, highway, or water in accordance with international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated, that I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, and disposal which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I certify that I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I have selected the most appropriate method of transport.

Printed/Typed Name

ERIK JOHNSON

Signature

Erik Johnson

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

D. Wetzel

Signature

D. Wetzel

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted below

Printed/Typed Name

W. C. B. J. et

Signature

W. C. B. J. et

GENERATOR

TRANSPORTER

FACILITY

BP12496 V4 7386



CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550.

**UNIFORM HAZARDOUS  
WASTE MANIFEST**

Generator's US EPA ID No.

Manifest Document No.

2. Page 1  
of

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY, SUNVALLEY CA.  
4. Generator's Phone 213 875-2930 91352

A. State Manifest Document Number

87553868

B. State Generator's ID

HIAHQ3610220166

C. State Transporter's ID

54200  
D. Transporter's Phone 213 439-8500

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

PRI 1835 E. 29TH ST  
SIGNAL HILL CA

10. US EPA ID Number

CA108010111059

G. State Facility's ID

CA108010111059

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. WASTE WATER & OIL NOS NA 1270  
Combustible Liquid

12. Containers  
No. Type

001 TIT 01300

13. Total Quantity

01300

14. Unit  
Wt/Vol

PS 221

15. Waste No.

State EPA/Other

J. Additional Descriptions for Materials Listed Above

WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above

a. R01

15. Special Handling Instructions and Additional Information

RUBBER GLOVES, SAFETY GLASSES

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

FRED SEYMOUR

Signature

Fred Seymour

Month Day Year

10/9/12/1988

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

KENNETH T. KING

Signature

Kenneth T. King

Month Day Year

10/9/12/1988

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Pete Mach

Signature

Pete Mach

Month Day Year

09/21/1988

Instructions on back

UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of 1

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICE  
11310 SHERMAN WAY. SUN VALLEY, CALIF.  
4. Generator's Phone (818) 745-4201 71252

A. State Manifest Document Number  
88076220

B. State Generator's ID

H 1A1H0316101210161

5. Transporter 1 Company Name

KING & KING OIL

6. US EPA ID Number

K1A1D19181142131210

C. State Transporter's ID

D. Transporter's Phone 213-250-2500

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

RR1, 1835 E. 29TH ST  
SIGNAL HILL, CALIF.

10. US EPA ID Number

K1A1D181010111059

G. State Facility's ID

C 1A1D181010111059

H. Facility's Phone

1-213-595-4592

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
No. Type

13. Total  
Quantity

14. Unit  
Wt/Vol

I. Waste No.

a. COMBUSTIBLE LIQUID  
WASTE OIL ADS. NA 1270

1011 TTT 01051215 G

State  
221

EPA/Other

b.

State

EPA/Other

c.

State

EPA/Other

d.

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above

a. RO1

b.

c.

d.

15. Special Handling Instructions and Additional Information

RUBBER GLOVES, SAFETY GLASSES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a small quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threats to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

Signature

Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

Do Not Write Below This Line

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-862-7550



H88-2114

UNIFORM HAZARDOUS WASTE MANIFEST		Generator's US EPA ID No.	Manifest Document No.	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address <b>Flight Accessory Services</b> <b>11310 Sherman Way</b> <b>Sun Valley, CA 91352</b>		C1A1D10101646121570101011		A. State Manifest Document Number <b>87553871</b>	
4. Generator's Phone (818) 765-6201		6. US EPA ID Number		B. State Generator's ID <b>H A H Q 6 0 2 2 0 6 6</b>	
5. Transporter 1 Company Name <b>Disposal Control Ser</b>		7. Transporter 2 Company Name		C. State Transporter's ID <b>90705/910211</b>	
8. US EPA ID Number		9. Designated Facility Name and Site Address <b>Pacific Treatment</b> <b>2190 Main St.</b> <b>San Diego, CA 92113</b>		D. Transporter's Phone <b>1-800-824-3345</b>	
10. US EPA ID Number		11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		E. State Transporter's ID	
12. Containers No. Type		13. Total Quantity		F. Transporter's Phone	
14. Unit Wt/Vol		15. Waste No.		G. State Facility's ID <b>C A D 0 9 5 8 9 4 5 5 6</b>	
16. State		17. EPA/Other		H. Facility's Phone <b>1-619-233-0424</b>	
18. State		19. EPA/Other		I. Waste No.	
20. State		21. EPA/Other		J. Additional Descriptions for Materials Listed Above	
22. State		23. EPA/Other		K. Handling Codes for Wastes Listed Above	
24. State		25. EPA/Other		a. <b>99 slab</b>	
26. State		27. EPA/Other		b.	
28. State		29. EPA/Other		c.	
30. State		31. EPA/Other		d.	
15. Special Handling Instructions and Additional Information <b>Gloves, Goggles</b>					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name <b>ERIK JOHNSON</b>		Signature <i>Erik Johnson</i>		Month Day Year <b>11/21/98</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials		Printed/Typed Name <b>Jimmy Lizardo</b>		Signature <i>Jimmy Lizardo</i>	
18. Transporter 2 Acknowledgement of Receipt of Materials		Printed/Typed Name		Signature	
19. Discrepancy Indication Space <b>13aj. 7y = ~2800p</b>		Printed/Typed Name <b>Bob Miller</b>		Signature <i>Bob Miller</i>	
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.		Printed/Typed Name		Signature	
21. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.		Printed/Typed Name		Signature	

Manifest Document No. 210206		Is not required for generator's copy	
Name and Mailing Address <b>Flight Accessory Services</b> <b>11310 Sherman Way, Sun Valley, CA 91252</b>		A. State Manifest Document Number <b>87553869</b>	
4. Generator's Phone (818) 765-6201		B. State-Generator's ID <b>HAHQ36022066</b>	
5. Transporter 1 Company Name <b>Disposal Control Ser.</b>	6. US EPA ID Number <b>ICAT080034184</b>	C. State Transporter's ID <b>910211-9000</b>	
7. Transporter 2 Company Name	8. US EPA ID Number	D. Transporter's Phone <b>1-800-824-3345</b>	
9. Designated Facility Name and Site Address <b>Casmalia Resource Management</b> <b>Ntu Road</b> <b>Casmalia, CA 93429</b>	10. US EPA ID Number <b>ICAD020748125</b>	E. State Transporter's ID	
		F. Transporter's Phone	
		G. State Facility's ID <b>CAB020748125</b>	
		H. Facility's Phone <b>1-805-937-8449</b>	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol
a. <b>Hazardous Waste Solid Rq. Nos.</b> <b>ORM-E-NA 9189</b>	<b>904 DM</b>	<b>1</b>	<b>1</b>
b. <b>Hazardous Waste Solid Rq. Nos.</b> <b>ORM-E-NA 9189</b>	<b>0104 DM</b>	<b>1</b>	<b>1</b>
c.			
d.			
J. Additional Descriptions for Materials Listed Above a. <b>See Attached Analysis</b> b. <b>Production Trash P.U.C. Tapes</b> <b>cc</b>		K. Handling Codes for Wastes Listed Above a. <b>03</b> b. <b>03</b> c.	
15. Special Handling Instructions and Additional Information <b>Gloves, Goggles</b>			
16. <b>GENERATOR'S CERTIFICATION:</b> I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.			
Printed/Typed Name <b>ERIK JOHNSON</b>		Signature <i>Erik Johnson</i> Month Day Year <b>11/40/88</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials			
Printed/Typed Name <b>THOMAS C SITER SR</b>		Signature <i>Thomas C Siter Sr</i> Month Day Year <b>11/21/88</b>	
18. Transporter 2 Acknowledgement of Receipt of Materials			
Printed/Typed Name		Signature Month Day Year	
19. Discrepancy Indication Space			
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.			
Printed/Typed Name <b>Casmalia Resource</b>		Signature <i>Gennis Fraley</i> Month Day Year <b>11/21/88</b>	

DHS 8022 A (1/87)

EPA 8700-22

(Rev: 9-86) Previous editions are obsolete.

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

INSTRUCTIONS ON THE BACK

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
of 1

Information in the shaded areas  
is not required by Federal law.

1. Generator's Name and Mailing Address

Flight Accessory Services  
11310 Sherman Way  
Sun Valley, CA 91352

A. State Manifest Document Number

87553871

B. State Generator's ID

H A H Q 6 0 2 2 0 6 6

4. Generator's Phone (818) 765-6201

6. US EPA ID Number

1 C A I T 0 1 8 0 0 3 4 1 1 8 6

5. Transporter 1 Company Name

Disposal Control Ser

C. State Transporter's ID

907057410211

7. Transporter 2 Company Name

D. Transporter's Phone 1-800-824-3345

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

Pacific Treatment  
2190 Main St.  
San Diego, CA 92113

10. US EPA ID Number

1 C A I D 0 9 5 8 9 4 5 5 6

G. State Facility's ID

C A I D 0 9 5 8 9 4 5 5 6

H. Facility's Phone

1-619-233-0424

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total  
Quantity

14. Unit  
Wt/Vol

15. Waste No.

a. Hazardous Waste Solid RQ Nos. 094-E-NA 9189

01218 D110101017

State

181

EPA/Other 181

1008/DO 7

State

181

EPA/Other

1008/DO 7

State

181

EPA/Other

1008/DO 7

State

181

EPA/Other

1008/DO 7

J. Additional Descriptions for Materials Listed Above

A. See Profile 82-0977

K. Handling Codes for Wastes Listed Above

a.

b.

c.

d.

15. Special Handling Instructions and Additional Information

Gloves, Goggles

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

ERIK JOHNSON

Signature

Erik Johnson

Month Day Year

11/21/98

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Jimmy Lizardo

Signature

Jimmy Lizardo

Month Day Year

11/21/98

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Bob M. Hall

Signature

Bob M. Hall

Month Day Year

11/22/98

(Type in typewriter).

Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1 of 1

Information in the shaded areas  
is not required by Federal law.

# UNIFORM HAZARDOUS WASTE MANIFEST

CAD00064625711121918

3. Generator's Name and Mailing Address

Flight Aircress Services  
11370 Sherman Way, Sun Valley, Ca 91352

A. State Manifest Document Number

87553872

B. State Generator's ID

AAHQ36022066

C. State Transporter's ID

54200

D. Transporter's Phone (913) 439-8500

4. Generator's Phone (913) 785-6201

5. Transporter 1 Company Name

KING + KING OIL

6. US EPA ID Number

CAD981475320

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

RRI, 1835 E. 29th St.  
SIGNAL HILL, CALIF

10. US-EPA ID Number

CAD705100111059

G. State Facility's ID

CAD705100111059

H. Facility's Phone

1-213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. Combustible Liquid  
WASTE OIL N.O.S. NA 1270

12. Containers

No. Type

1 1

13. Total Quantity

400 G

14. Unit Wt/Vol

1

Waste No.

221

b. WASTE OIL N.O.S. NA 1270

1 1

400 G

1

221

c. WASTE OIL N.O.S. NA 1270

1 1

400 G

1

221

d. WASTE OIL N.O.S. NA 1270

1 1

400 G

1

221

J. Additional Descriptions for Materials Listed Above

WASTE OIL + WATER

K. Handling Codes for Wastes Listed Above

ROI

15. Special Handling Instructions and Additional Information

Rubby Gloves, SAFETY GLASSES

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Printed/Typed Name

Jesse Cabrera

Signature

Jesse Cabrera

Month Day Year

11/21/08

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

CONCEPCION CARRERA

Signature

Concepcion Carrera

Month Day Year

11/22/08

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Luis PAZ

Signature

Luis P

Month Day Year

11/22/08

**UNIFORM HAZARDOUS  
WASTE MANIFEST**

CAD0000646207

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

Flight Accessory Service  
11310 Sherman Way, San Ramon, CA

4. Generator's Phone (818) 765-6201

5. Transporter 1 Company Name

King & King Oil

6. US EPA ID Number

CA09811423320

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

PRI 1835 E. 29th St  
Signal Hill, CA

10. US EPA ID Number

CA1099911059

A. State Manifest Document Number

87640466

B. State Generator's ID

CA1099911059

C. State Transporter's ID

D. Transporter's Phone (213) 479-6500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

213-565-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

13. Total  
Quantity

14. Unit  
Wt./Vol

15. Waste No.

a. Combustible Liquids

Waste oil + water NOS NA 1270

1001 TIT0112910 G

State  
221

EPA/Other

b.

State

EPA/Other

c.

State

EPA/Other

d.

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

Waste oil + water

K. Handling Codes for Wastes Listed Above

a. R01

b.

c.

d.

15. Special Handling Instructions and Additional Information

Remove gloves + safety goggles

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Jesse Cabrera

Signature

Jesse Cabrera

Month Day Year

10/1/389

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Jorge Carrera

Signature

Jorge Carrera

Month Day Year

10/1/389

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Rebecca Carrera

Signature

Rebecca Carrera

Month Day Year

6/1/215

Use print or type. (Form designed for use on electric typewriter).

UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.Page 1  
of 1Information in the shaded areas  
is not required by Federal law.

## 3. Generator's Name and Mailing Address

Flight Accessory Services  
11300 Sherman LANE, SUN VALLEY, CA

4. Generator's Phone (818) 765-6201 91352

## 5. Transporter 1 Company Name

KING &amp; KING OIL

6. US EPA ID Number

CA 129 28423720

## 7. Transporter 2 Company Name

8. US EPA ID Number

## 9. Designated Facility Name and Site Address

PRI 1835 E. 29th ST  
SIGNAL HILL, CA

10. US EPA ID Number

CA T0910911057

## A. State Manifest Document Number

37646407

## B. State Generator's ID

HAHQ36022066

## C. State Transporter's ID

54200

D. Transporter's Phone 213-439-8500

## E. State Transporter's ID

F. Transporter's Phone

## G. State Facility's ID

HAHQ3607259

## H. Facility's Phone

213-595-6577

## 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

## 12. Containers

No.

Type

13. Total  
Quantity14. Unit  
Wt/Vol

## 15. Waste No.

a. Combustible Liquid  
WASH WATER + OIL NCS. NA 1270

0101TT 0109510 C

## State

221

## EPA/Other

## State

## EPA/Other

## State

## EPA/Other

## State

## EPA/Other

## J. Additional Descriptions for Materials Listed Above

WASH OIL + WATER.

## K. Handling Codes for Wastes Listed Above

a. RO1

c.

## b.

d.

201

## 15. Special Handling Instructions and Additional Information

Rubber Gloves + SAFETY GLASSES

## 16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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## Printed/Typed Name

JESSE CABRERA

## Signature

Jesse Cabrera

## Month Day Year

10/21/08/9

## 17. Transporter 1 Acknowledgement of Receipt of Materials

## Printed/Typed Name

J. Concepcion CARRERA

## Signature

J. Concepcion Carrera

## Month Day Year

10/21/08/9

## 18. Transporter 2 Acknowledgement of Receipt of Materials

## Printed/Typed Name

## Signature

## Month Day Year

## 19. Discrepancy Indication Space

## 20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

## Printed/Typed Name

TOMAS TRUJILLO

## Signature

Tomas Trujillo

## Month Day Year

09/13/09



UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

AD000646257

Manifest  
Document2. Page 1  
ofInformation in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailed Address

Flight Accessory Service  
1310 SHERMAN WAY SUN VALLEY, CA 91352

4. Generator's Phone (818) 765-6201

A. State Manifest Document Number

87555952

B. State Generator's ID

H A HQ36022066

5. Transporter 1 Company Name

King + King

6. US EPA ID Number

CA0981423320

C. State Transporter's ID

54200

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone (213) 437-6500

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

PRI 1835 E 29th ST.  
Signal Hill, CA

10. US EPA ID Number

CA090011057

G. State Facility's ID

H A HQ36022066

H. Facility's Phone

(510) 595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total  
Quantity14. Unit  
Wt/Vol

1. Waste No.

a. Combustible Liquid  
WASTE OIL + WATER NOS NA 1270

0.91 T, 100850 G

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

WASTE OIL + WATER

K. Handling Codes for Wastes Listed Above

a. R01

b.

c.

d.

15. Special Handling Instructions and Additional Information

Rubber Gloves + Safety Glasses.

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Jesse Cabrera

Signature

Jesse Cabrera

Month Day Year

10/3/1987

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. Gonzalez Carra

Signature

J. Gonzalez Carra

Month Day Year

08/10/87

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Loren Brooks

Signature

Loren Brooks

Month Day Year

10/3/1987

UNIFORM HAZARDOUS WASTE MANIFEST		Generator's US EPA ID No.	Manifest Document No.	1991 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address <b>Flight Accessory Services 11310 Sherman Way Sun Valley, CA 91352</b>		6 2			A. State Manifest Document Number <b>88303411</b>
4. Generator's Phone (818) 765-6201					B. State Generator's ID <b>HAH036922066</b>
5. Transporter 1 Company Name <b>Disposal Control Service</b>		8. US EPA ID Number <b>CAT080034184</b>			C. State Transporter's ID <b>9810906</b>
7. Transporter 2 Company Name		8. US EPA ID Number			D. Transporter's Phone <b>714-983-0342</b>
9. Designated Facility Name and Site Address <b>Pacific Treatment P.O. Box 13626 San Diego, CA 92113</b>		10. US EPA ID Number <b>CA0095894556</b>			E. State Transporter's ID <b>DS</b>
					F. Transporter's Phone <b>619-233-0424</b>
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type	13. Total Quantity	14. Unit Wt./Vol	Waste No.
a. <b>California regulated waste only</b>		0 0 1 T T 0 4 P 0 0 6			State <b>135</b> EPA/Other <b>N/A</b>
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other
J. Additional Descriptions for Materials Listed Above <b>water 85-90% mud 10-15% waste water, sump</b>		K. Handling Codes for Wastes Listed Above a. <b>97-12</b> b. c. d.			
15. Special Handling Instructions and Additional Information <b>Wear appropriate personal protective equipment.</b>					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name <b>Erik Johnson</b>		Signature <i>Erik Johnson</i>		Month Day Year <b>12 22 89</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name <b>Dave Dade</b>		Signature <i>Dave Dade</i>		Month Day Year <b>03 29 89</b>	
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space <b>This Hazardous Waste has been NOC. ONE DANGER / 12 in 10/10/90 1 (EPA) 0007</b>					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name <b>DARCEL STAGER</b>		Signature <i>Darcel Stager</i>		Month Day Year <b>03 29 89</b>	



UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.2. Page 1  
of 1Information in the shaded areas  
is not required by Federal law.

## 3. Generator's Name and Mailing Address

Flight Accessory Service  
11370 SHERMAN WAY. SUN VALLEY, CA

## 4. Generator's Phone

(818) 765-7201 91352

## A. State Manifest Document Number

87040468

## B. State Generator's ID

## 5. Transporter 1 Company Name

King + King Oil

6. US EPA ID Number  
CA D981423320

## C. State Transporter's ID

## D. Transporter's Phone

## 7. Transporter 2 Company Name

8. US EPA ID Number

## E. State Transporter's ID

## F. Transporter's Phone

## 9. Designated Facility Name and Site Address

PRI 1835 E. 29th ST.

SIGNAL Hill, CA. KATIA 11011059

## G. State Facility's ID

## H. Facility's Phone

## 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

## 12. Containers

13. Total  
Quantity14. Unit  
Wt / Vol

## 1. Waste No.

a. COMBUSTIBLE Liquid

Waste oil + water N.O.S NA 1270 001T1011475 Gal.

## State

771

## EPA/Other

## State

EPA/Other

## State

EPA/Other

## State

EPA/Other

## J. Additional Descriptions for Materials Listed Above

WASTE OIL + WATER

## K. Handling Codes for Wastes Listed Above

c. RO1

d.

## 15. Special Handling Instructions and Additional Information

Rubber GLOVES + SAFETY GLASSES

## 16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

## Printed/Typed Name

Jesse Cabrera

## Signature

Jesse Cabrera

## Month Day Year

10/4/11/28/9

## 17. Transporter 1 Acknowledgement of Receipt of Materials

## Printed/Typed Name

KENNETH T. KING

## Signature

Kenneth T. King

## Month Day Year

10/4/11/28/9

## 18. Transporter 2 Acknowledgement of Receipt of Materials

## Printed/Typed Name

## Signature

## Month Day Year

10/4/11/28/9

## 19. Discrepancy Indication Space

120

## 20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

## Printed/Typed Name

Rita Madrid

## Signature

Rita Madrid

## Month Day Year

10/4/11/28/9

Print or type. (Form designed for use on elite (12-pitch typewriter).)

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's Name and Mailing Address  
**FLIGHT ACCESSORY SERVICES**  
**11310. SHERMAN WAY, SUN VALLEY CALIF 91352**

4. Generator's Phone  
**(818) 765-6201**

5. Transporter 1 Company Name  
**KING & KING OIL**

7. Transporter 2 Company Name

9. Designated Facility Name and Site Address  
**P.R.I. 1835 E 29TH ST.**  
**SIGNAL HILL CAL.**

Generator's US EPA ID No.  
**DO00064625703719**

6. US EPA ID Number  
**CA 09 81423320**

8. US EPA ID Number

10. US EPA ID Number  
**CA T090011057**

2. Page of **1**

Information in the shaded areas is not required by Federal law.

3. Manifest Document Number  
**87550951**

B. State Generator's ID  
**H A A 936022066**

C. State Transporter's ID  
**54200**

D. Transporter's Phone  
**213-437-8500**

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	1. Waste No.	
	No.	Type			State	EPA/Other
a. <b>COMBUSTABLE LIQUID.</b> <b>WASTE WATER &amp; OIL NO. NA 1270</b>	<b>CO</b>	<b>1</b>	<b>TT</b>	<b>00600</b>	<b>221</b>	
b.						
c.						
d.						

J. Additional Descriptions for Materials Listed Above  
**WASTE OIL & WATER.**

K. Handling Codes for Wastes Listed Above

a. **R01.**

b.

c.

d.

15. Special Handling Instructions and Additional Information  
**RUBBER GLOVES & SAFETY GLASSES.**

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name  
**ERIE JOHNSON**

Signature

Month Day Year  
**12/1/97**

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name  
**J. CONCEPCION CARRERA**

Signature

Month Day Year  
**12/1/97**

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year  
**03/11/97**

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
**JOE MARILO**

Signature

Month Day Year  
**12/1/97**

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. **D000646267**

Manifest Document No.

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

**Flight Accessory Services**  
**11310 Sherman Way, Sun Valley, CA. 91352**  
**(818) 765-6201**

State Manifest Document Number

**01550350**

B. State Generator's ID

**HAHQ36022066**

5. Transporter 1 Company Name

**KING + KING OIL**

6. US EPA ID Number

**CAD981423320**

C. State Transporter's ID

**54200**

D. Transporter's Phone

**(415) 439-0500**

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

**P.R.I. 1835 E. 99th ST.**  
**SIGNAL HILL, CA.**

10. US EPA ID Number

**CAT080011059**

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

**Combustible Liquid**  
**WASTE WATER + OIL NOS. NA 1270**

12. Containers  
No. Type

**90, 1**

13. Total Quantity

**99690**

14. Unit  
Wt./Vol.

I. Waste No.

**State 21**

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

**WASTE OIL + WATER**

K. Handling Codes for Wastes Listed Above

a. **R01**

b.

c.

d.

15. Special Handling Instructions and Additional Information

**Rubber Gloves + Safety Goggles**

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name **ERIC JOHNSON**

Signature *Eric Johnson*

Month Day Year  
**06 07 89**

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

**KENNETH T. KING**

Signature *Kenneth T. King*

Month Day Year  
**06 07 89**

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

*Laura B...*

Signature *Laura B...*

Month Day Year  
**06 07 89**

# UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest Document No.

Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

Flight Accessory Service  
11310 SHERMAN WAY, SUN VALLEY, CA.

4. Generator's Phone (818) 765-6201

91352

5. Transporter 1 Company Name

KING + KING OIL

6. US EPA ID Number

ICAD9811473320

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

P.R.I. 1835 SIGNAL Hill, CA.  
E. 29th ST.

10. US EPA ID Number

ICAT990011059(213)595-6597

A. State Manifest Document Number

87040409

B. State Generator's ID

HIAHQ36022064

C. State Transporter's ID

54200

D. Transporter's Phone (619) 439-8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

HIAHQ360117352

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total Quantity

14. Unit Wt./Vol

1. Waste No.

a. Combustible Liquids  
WASTE OIL + WATER

N.O.S. AIA 1270

0197

1

State

221

EPA/Other

0001

b.

State

EPA/Other

c.

State

EPA/Other

d.

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

WASTE OIL + WATER

K. Handling Codes for Wastes Listed Above

a. R01

c.

d.

15. Special Handling Instructions and Additional Information

Rubber Gloves + Safety Glasses.

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Jesse Cabrera

Signature

Jesse Cabrera

Month Day Year

10/11/289

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. COCAFCION BRERA

Signature

J. COCAFCION BRERA

Month Day Year

10/12/289

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Joe Brera

Signature

Joe Brera

Month Day Year

10/13/289

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICE  
11310 SHARON WAY SUN VALLEY, CA 91352

A. State Manifest Document Number

89475820

B. State Generator's ID

41A4Q36022068

C. State Transporter's ID

710211

D. Transporter's Phone

1-800-874-3345

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CIAT9006461117

H. Facility's Phone

(809) 386-9711

4. Generator's Phone (818) 765-6211

5. Transporter 1 Company Name

DISPOSAL SERVICE

8. US EPA ID Number

CIAT9006461117

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

KATHLEEN A.H.  
35201 SHARON RD.  
SUN VALLEY, CA 91352

10. US EPA ID Number

CIAT9006461117

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. HAZARDOUS WASTE  
UN - E - 9189

b. *Returned to FAS on 10-12-89 PROFILE PROBLEM*

J. Additional Descriptions for Materials Listed Above

PROF. \* H-6526

12. Containers

No.

Type

13. Total Quantity

14. Unit  
Wt/Vol

1. Waste No.

State

151

EPA/Other

500,000

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

K. Handling Codes for Wastes Listed Above

a.

b.

c.

d.

15. Special Handling Instructions and Additional Information

GLASS BOTTLES / 310 YOUNG ST. / 10-12-89

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

JOSE L. OCHOA

Signature

JOSE L. OCHOA

Month Day Year

10 10 89

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

JOSE L. OCHOA

Signature

JOSE L. OCHOA

Month Day Year

10 10 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

JOSE L. OCHOA

Signature

JOSE L. OCHOA

Month Day Year

10 10 89

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

10 10 89

894/5918

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA CALL 1-800-424-8802.

Designed for use on elite dot matrix typewriter.

HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest Document No.

of 6 is not required by receiver

Name and Mailing Address  
ACCESSORY SER.  
SHERMAN WAY, SUN VALLEY  
Generator's Phone (818) 745-6201

Transporter 1 Company Name  
DISPOSAL CONTROL SER  
Transporter 2 Company Name  
KIAIDICQ9141814

Designated Facility Name and Site Address  
PACIFIC TREATMENT  
2190 MAIN ST  
SAN DIEGO, CALIF 92103  
KIAIDICQ9141814

A. State Manifest Document Number  
89475918  
B. State Generator's ID  
C. State Transporter's ID  
910211/50700  
D. Transporter's Phone  
1-800-874-3345  
E. State Transporter's ID  
F. Transporter's Phone  
G. State Facility's ID  
H. Facility's Phone  
1-619-233-0424

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt./Vol	1. Waste No.
	No.	Type			
HAZARDOUS WASTE SOLID RQ ORME-NA 9169 FOOD DRUG/PC 7	019	DRUM	4.75 Y		State 181 EPA/Other FOOD/DRUG/PC 7
HAZARDOUS WASTE SOLID RQ ORME-NA 9169 FOOD	003	DRUM	1.175 Y		State 181 EPA/Other FOOD
HAZARDOUS WASTE SOLID RQ ORME-NA 9169 IT	15	DRUM	1.5 Y		State 181-ET EPA/Other IT
RQ WASTE FLAMMABLE SOLID NOS. FLAMMABLE SOLID UN1325 DRUM FOOD	006	DRUM	1.5 Y		State 181 EPA/Other FOOD

J. Additional Descriptions for Materials Listed Above  
a. - CHROME CAKE # 88-0977  
b. - NICKEL WASTE # 89-1648  
c. - CHROME & SOLVENT # 89-1647

K. Handling Codes for Wastes Listed Above  
a. 1A  
b. 1A  
c. VOID  
d. 1A

15. Special Handling Instructions and Additional Information  
GLOVES, GOGGLES  
(28X55301)

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: ERIK JOHNSON  
Signature: Erik Johnson  
Month Day Year: 10/26/89

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name: Michael B. VanAlstine  
Signature: Michael B. VanAlstine  
Month Day Year: 10/28/89

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name: \_\_\_\_\_  
Signature: \_\_\_\_\_  
Month Day Year: \_\_\_\_\_

19. Discrepancy Indication Space  
11c: VOID  
11a, 11b: INcomplete... N.O.S. / 13a: 4.75 Y = 8550P  
13b: 0.75 Y = 1350P / 13d: 1.5 Y = 1500P

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
Printed/Typed Name: JUAN J. NUÑARRETE  
Signature: Juan J. Nuñarete  
Month Day Year: 10/28/89

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAY

Please print or type. (Form designed for use on elite/arc-nitch typewriter).

UNIFORM HAZARDOUS WASTE MANIFEST		Generator's US EPA ID No. CA 100 064 6257	Manifest Document No.	Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address Flight Accessory Service 11370 Sherman Way Sun Valley, Ca			A. State Manifest Document Number 89475819		
4. Generator's Phone (818) 765-6201 71352			B. State Generator's ID HIAH1036102121066		
5. Transporter 1 Company Name King + King Oil			C. State Transporter's ID 54200		
6. US EPA ID Number KMD9514123320			D. Transporter's Phone (213) 439-8500		
7. Transporter 2 Company Name			E. State Transporter's ID		
8. US EPA ID Number			F. Transporter's Phone		
9. Designated Facility Name and Site Address P.R.I. 1835 E. 29th ST Signal Hill, Ca			G. State Facility's ID HIAH103610171215121		
10. US EPA ID Number KAT1081010111051			H. Facility's Phone (213) 595-6577		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Combustible Liquid Waste water + oil ACS: NA 1270		0101 TE	1600		State 221 EPA/Other D001
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other
J. Additional Descriptions for Materials Listed Above Waste oil + water			K. Handling Codes for Wastes Listed Above a. R01 c. 19		
15. Special Handling Instructions and Additional Information Rubber Gloves + Safety Goggles					
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
Printed/Typed Name Jesse Cabrera			Signature Jesse Cabrera		Month Day Year 12/15/89
17. Transporter 1 Acknowledgement of Receipt of Materials					
Printed/Typed Name I CONCEPCION CARRERA			Signature I Concepcion Carrera		Month Day Year 12/15/89
18. Transporter 2 Acknowledgement of Receipt of Materials					
Printed/Typed Name			Signature		Month Day Year 11/11/88
19. Discrepancy Indication Space					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.					
Printed/Typed Name Rete Madrid			Signature Rete Madrid		Month Day Year 12/15/89

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

Do Not Write Below This Line

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

**UNIFORM HAZARDOUS  
WASTE MANIFEST**

Generator's US EPA ID No.

Manifest  
Document No.

2. Page 1  
1 of 1

Information in the shaded areas  
is not required by Federal law.

AD000646257

3. Generator's Name and Mailing Address

Flight Accessory Service  
11310 Sherman Way, Sim Valley, Ca

4. Generator's Phone (818) 765 4201

91352

5. Transporter 1 Company Name

KING + KING OIL

6. US EPA ID Number

ICAD981423220

7. Transporter 2 Company Name

8. US EPA ID Number

A. State Manifest Document Number

87646471

B. State Generator's ID

HIAH9360220166

C. State Transporter's ID

54200

D. Transporter's Phone

(916) 439-8500

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

P.R.I. 1835 E. 29th ST

SIGNAL Hill Ca

10. US EPA ID Number

ICAT990011059

G. State Facility's ID

HIAH9340117252

H. Facility's Phone

213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total  
Quantity

14. Unit  
Wt./Vol

1. Waste No.

a. Combustible Liquid Waste Water + Oil  
NOS HA 1270

0191 TT 820

State 221

EPA/Other 0001

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

Waste oil + water

K. Handling Codes for Wastes Listed Above

a. R01

b.

d.

15. Special Handling Instructions and Additional Information

Rubber Gloves + Safety Glasses

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Jesse Cabrera

Signature

Jesse Cabrera

Month Day Year

10/19/89

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. Conception Cabrera

Signature

J. Conception Cabrera

Month Day Year

10/19/89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name

Patricia M. Smith

Signature

Patricia M. Smith

Month Day Year

10/19/89



Please print or type. (Form designed for use on elite (12-pitch typewriter).

UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

CA D000646257

Manifest  
Document No.Page 1  
of 1Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 STEVENSON WAY. SUN VALLEY, CA  
91352

4. Generator's Phone

818 765 6201

5. Transporter 1 Company Name

RHODECHEM

6. US EPA ID Number

CA D0008364432

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

RHODECHEM CORP.  
4251515 AVE  
INGLEWOOD, CA 90801

10. US EPA ID Number

CA D0008364432

A. State Manifest Document Number

88589867

B. State Generator's ID

H H H Q 36022064

C. State Transporter's ID

H H H Q 36022064

D. Transporter's Phone

213 7766233

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CA D0008364432

H. Facility's Phone

213 7766233

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total  
Quantity14. Unit  
Wt/Vol

15. Waste No.

a.

WASTE OIL-A LIQUID NOS  
NA 1643

CONDENSED OILS C

State

211

EPA/Other

FOO1

b.

State

EPA/Other

c.

State

EPA/Other

d.

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

OIL TRAIL, 80%  
WATER, 19%  
METAL FILINGS 1%

K. Handling Codes for Wastes Listed Above

a.

01

b.

c.

d.

15. Special Handling Instructions and Additional Information

AIRLON, GLOVES, BOOTS

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Jesse Cabrera

Signature

Jesse Cabrera

Month Day Year

08 09 89

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

SEANS 55277

Signature

Seans

Month Day Year

08 09 89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

JERRY I SADLER

Signature

Jerry I Sadler

Month Day Year

08 09 89

Do Not Write Below This Line

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

88589867  
IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-952-7550

Please print or type. (Form designed for use on elite (12-pitch typewriter).

# UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.

Page 1  
of 1

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

Flight Accessories Service  
11310 SHIMMWAY St  
Van Nuys, CA 91411

4. Generator's Phone (714) 765-6201

A. State Manifest Document Number

89475821

B. State Generator's ID

HA11316117171

C. State Transporter's ID

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's Phone

5. Transporter 1 Company Name

King + King Oil

6. US EPA ID Number

HA11316117171

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

PR I 113 113 113 113  
Site C 113 113 113 113

10. US EPA ID Number

HA11316117171

G. State Facility's ID

HA11316117171

H. Facility's Phone

(513) 513-1131

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. COMBUSTIBLE LIQUID:  
WASH WATER + OIL AHS NA 270

12. Containers  
No. Type

13. Total  
Quantity

14. Unit  
Wt/Vol

1. Waste No.

State  
221

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

WASH OIL + WATER

K. Handling Codes for Wastes Listed Above

a. RO1

b.

c.

d.

15. Special Handling Instructions and Additional Information

Rubber Gloves + Safety Goggles

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Signature

Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Signature

Month Day Year

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

Do Not Write Below This Line

YELLOW: GENERATOR RETAINS

# UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.

Manifest Document No.

2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

HAWKEE PACIFIC FAS  
11310 SHERMAN WAY, SUN VALLEY CALIF

4. Generator's Phone

(618) 765-6201

5. Transporter 1 Company Name

6. US EPA ID Number

DISPOSAL CONTROL SERVICES INC. 18101341/1814

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

APPROPRIATE TECH. II  
1700 AMY WELLS ROAD

10. US EPA ID Number

CHULA VISTA CAL 92011 CIAT081001101101

B. State Generator's ID

H 14140610212101611

C. State Transporter's ID

007333

D. Transporter's Phone

1-714-983-0342

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CIAT081001101101

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
No. Type

13. Total Quantity

14. Unit  
Wt/Vol

1. Waste No.

2. Q. WASTE CORROSIVE LIQUID NOS

UN # 1760

001/TIT 1/1010106

State 791  
EPA/Other  
State 0001/2006

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

3. SULFURIC ACID 50% - HYDROFLUORIC ACID 15%

R01

TREATMENT FACILITY

K. Handling Codes for Wastes Listed Above

a. 99  
c. 99  
d.

15. Special Handling Instructions and Additional Information

GLOVES - GOGGLES - ETC.

18.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

ERIK JOHNSON

Signature

Erik Johnson

Month Day Year

11/03/19

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

PHILLIP FARLEY

Signature

Phillip Farley

Month Day Year

11/03/19

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

Rejected - not acceptable at this time SE 11/03/19

13. Actual gallons 475 gallons SE

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

SILVIA L ESQUIVEL

Signature

Silvia L Esquivel

Month Day Year

11/19/19

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

Please print or type. (Form designed for use on electric typewriter).

# UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.

Page 1  
of

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

Flight Accessibility Services  
11310 Lehigh Valley Blvd, CA  
4. Generator's Phone (810) 735-1352

A. State Manifest Document Number

89475823

B. State Generator's ID

4441211111111111

C. State Transporter's ID

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

4441211111111111

H. Facility's Phone

(213) 575-6517

5. Transporter 1 Company Name

6. US EPA ID Number

10A1291811423131210

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
No. Type

13. Total  
Quantity

14. Unit  
Wt/Vol

1. Waste No.

a. WACKUMER, CIL NIS NA 13109 70  
CC 13109 70

1101 - 9961510

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

a. R101

b.

c.

d.

15. Special Handling Instructions and Additional Information

Rebate to be made by generator

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Jesse Cabrera

Signature

Jesse Cabrera

Month Day Year

11/19/2017

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. CONCEPCION CARRERA

Signature

J. Concepcion Carrera

Month Day Year

11/19/2017

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

JOHN TAVARO

Signature

John Tavarro

Month Day Year

11/19/2017

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-862-7550

GENERATOR

TRANSPORTER

FACILITY

03410313  
IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

OMB No. 2050-0039 (Expires 9-30-91)  
or type. (Form designed for use on electric typewriter).

**UNIFORM HAZARDOUS WASTE MANIFEST**

Generator's US EPA ID No. CA 00001646257  
Manifest Document No. 11212115  
Page 1 of 1  
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY, SUN VALLEY CALIF. 91352

4. Generator's Phone (818) 265-6201

5. Transporter 1 Company Name  
KING & KING OIL

6. US EPA ID Number  
CAID 9181142131210

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address  
P.R.I.  
1635 E 29TH ST  
SIGNAL HILL, CALIF

10. US EPA ID Number  
CA T091010111057

A. State Manifest Document Number  
89475919

B. State Generator's ID  
HIAH031610220661

C. State Transporter's ID  
54200

D. Transporter's Phone  
712-439-8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID  
HIAH036047252

H. Facility's Phone  
1-213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
	No.	Type			
a. WASTE OIL NOS. COMBUSTIBLE LIQUID NA 1993	0011	TIT	141010	G	State 223 EPA/Other 0001
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above  
CONTAMINATED WITH HOLOGRATED SOLVENTS

K. Handling Codes for Wastes Listed Above  
a. K01  
c. 16

15. Special Handling Instructions and Additional Information  
GLOVES -

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
  
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Printed/Typed Name  
ERIK JOHANSON

Signature  
Erik Johanson

Month Day Year  
11/21/89

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name  
J. CONCEPCION CARRERA

Signature  
J. Concepcion Carrera

Month Day Year  
11/21/89

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name  
Rita M. M... ..

Signature  
Rita M. M... ..

Month Day Year  
12/22/89

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

Printed type. (Form designed for use on electric typewriter).

Generator's US EPA ID No.

Manifest  
Document No.Page 1  
of 1Information in the shaded areas  
is not required by Federal law.UNIFORM HAZARDOUS  
WASTE MANIFEST

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY SUN VALLEY CALIF

4. Generator's Phone (614) 765-6201 - 91352

5. Transporter 1 Company Name

KING &amp; KING OIL

6. US EPA ID Number

KIA119181/14213120

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

P.R.I.  
1635 E 29TH ST  
SIGNAL HILL, CALIF

10. US EPA ID Number

KIA119181/14213120

A. State Manifest Document Number

89475827

B. State Generator's ID

HIAH13161021201661

C. State Transporter's ID

54200

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

HIAH13161021201661

H. Facility's Phone

1-217-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. WASTE OIL NOS  
COMBUSTIBLE LIQUID N.A. 127012. Containers  
No. Type

0011 TT 0102120 G

13. Total  
Quantity14. Unit  
Wt/Vol

I. Waste No.

State 223

EPA/Other D001

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

WASTE OIL.

K. Handling Codes for Wastes Listed Above

a. RO1

c.

b.

d.

15. Special Handling Instructions and Additional Information

GLOVES.

16.

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Printed/Typed Name

ERIK JOHANSON

Signature

Erik Johanson

Month Day Year

12/10/1996

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. CARRERA

Signature

J. Carrera

Month Day Year

12/10/1996

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

12/10/1996

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

Tom Turolo

Signature

Tom Turolo

Month Day Year

12/10/1996

Do Not Write Below This Line

EPA 8022-A (1/88)

EPA 8700-22

(Rev. 9-88) Previous editions are obsolete.

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30 D

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8902; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

03400100

HAZARDOUS WASTE MANIFEST

Document No. 0000646257

State Manifest Document Number 89485786

3. Generator's Name and Mailing Address <b>Flight Accessory Service</b> 11310 Sherman Way Sun Valley CA 91352		6. US EPA ID Number ICAD91814123320	
4. Generator's Phone (818) 765-6201		8. US EPA ID Number	
5. Transporter 1 Company Name <b>KING + KING OIL</b>		10. US EPA ID Number	
7. Transporter 2 Company Name		12. Containers	
9. Designated Facility Name and Site Address <b>P.R.I.</b> 1835 E. 29th St. Signal Hill CA 90806		13. Total Quantity	
		14. Unit Wt/Vol	
		1. Waste No.	
		2. State	
		3. EPA/Other	
		4. State	
		5. EPA/Other	
		6. State	
		7. EPA/Other	
		8. State	
		9. EPA/Other	
		10. State	
		11. EPA/Other	

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers	13. Total Quantity	14. Unit Wt/Vol	1. Waste No.
a. <b>WASTE OIL NEOS CONCRETE</b> <b>Liquid N.A. 1993</b>	No. Type			2. State
b. the provisions of 49 CFR 173.133 (b) (1) (i) for locally identified in accordance with the provisions of 49 CFR 173.133 (b) (1) (i) above, was				3. EPA/Other
c. the provisions of 49 CFR 173.133 (b) (1) (i) for locally identified in accordance with the provisions of 49 CFR 173.133 (b) (1) (i) above, was				4. State
d. the provisions of 49 CFR 173.133 (b) (1) (i) for locally identified in accordance with the provisions of 49 CFR 173.133 (b) (1) (i) above, was				5. EPA/Other
PETROLEUM RECYCLING CORPORATION				

J. Additional Descriptions for Materials Listed Above <b>Contaminated with Halogenated Solvents</b> By: <b>[Signature]</b>	K. Handling Codes for Wastes Listed Above a. <b>RC1</b> b. c. d.
--	--

15. Special Handling Instructions and Additional Information  
**60 lbs. bags.**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name <b>Jesse Cabria</b>	Signature <b>[Signature]</b>	Month Day Year <b>10/10/2010</b>
17. Transporter 1 Acknowledgement of Receipt of Materials		
Printed/Typed Name <b>J. Conception CARRERA</b>	Signature <b>[Signature]</b>	Month Day Year <b>10/10/2010</b>
18. Transporter 2 Acknowledgement of Receipt of Materials		
Printed/Typed Name	Signature	Month Day Year

19. Discrepancy Indication Space		
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.		
Printed/Typed Name <b>Peter Morio</b>	Signature <b>[Signature]</b>	Month Day Year <b>10/10/2010</b>

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS



IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7660

89475920

GENERATOR

TRANSPORTER

FACILITY

<b>HAZARDOUS MANIFEST</b>		Generator's US EPA ID No. <u>ICIA100101646125711227</u>		Manifest Document No. <u>1</u>	Page 1 of 1	Information in the shaded areas is not required by Federal law.	
Generator's Name and Mailing Address <b>FLIGHT ACCESSORY SERVICES</b> <b>1530 SHERMAN AVE SUITE 100</b>						A. State Manifest Document Number <b>89475920</b>	
4. Generator's Phone (818) 765-6201						B. State Generator's ID <u>41A113149221901</u>	
6. Transporter 1 Company Name <b>RHO-CHEM CORP</b>				6. US EPA ID Number <u>ICIA10101831644312</u>		C. State Transporter's ID <u>014431</u>	
7. Transporter 2 Company Name				8. US EPA ID Number		D. Transporter's Phone <u>(213) 776-6233</u>	
9. Designated Facility Name and Site Address <b>RHO-CHEM CORP</b> <b>425 ISIS AVE</b> <b>TANGLE WOOD, CA 90301</b>				10. US EPA ID Number <u>ICIA10101831644312</u>		E. State Transporter's ID	
						F. Transporter's Phone	
G. State Facility's ID <u>ICIA10101831644312</u>						H. Facility's Phone <u>1-213-776-6233</u>	
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers		13. Total Quantity	
				No.	Type	14. Unit Wt/Vol	
a. WASTE FLAMMABLE LIQUID NOS (F-003 D-001) UN 1993-PAINTWASTE				2013		DM 2011612 G	
b. WASTE CRYM A NOS MA 1613 PKG <del>LIQUID WASTE 1,1,1 TRICHLOROETHANE LIQUID</del> CRM-A-NOS-MA 1613 (F-001)				0105		DM 01021710 G	
c.							
d.							
J. Additional Descriptions for Materials Listed Above a. PROFILE # 6511 - TOXIC - IGNITABLE b. PROFILE # 1228 -				K. Handling Codes for Wastes Listed Above a. <u>01</u> b. <u>01</u> c. d.			
15. Special Handling Instructions and Additional Information <u>GLOVES GOGGLES APRON</u>							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name <b>ERIK JOHNSON</b>				Signature <i>Erik Johnson</i>		Month Day Year <u>12/13/1990</u>	
17. Transporter 1 Acknowledgement of Receipt of Materials							
Printed/Typed Name <b>MICHAEL FULLER</b>				Signature <i>M. Fuller</i>		Month Day Year <u>10/13/1990</u>	
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name				Signature		Month Day Year	
19. Discrepancy Indication Space							
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.							
Printed/Typed Name <b>Tony Gaeta</b>				Signature <i>Tony Gaeta</i>		Month Day Year <u>10/13/1990</u>	

Do Not Write Below This Line



WASTE MANIFEST

100000046257

Manifest Document No.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICE  
11310 SHERMAN WAY SUN VALLEY CALIF 91352

4. Generator's Phone

818 765-6201

5. Transporter 1 Company Name

KING HAZARDOUS WASTE

6. US EPA ID Number

KA L0000027490

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

P.R.C. 1835 E. 29TH ST

10. US EPA ID Number

SIGNAL Hill CA 90806 CAT 080011059

B. State Generator's ID

HAH0360220661

C. State Transporter's ID

2668

D. Transporter's Phone

213-439-8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

213-595-6597

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

WASTE OIL NOS  
Combustible Liquid NA 1993

12. Containers

No. Type

0101

13. Total Quantity

Unit Wt / Vol

2175 G

14. State

223

EPA/Other

0001

State

08 44

EPA/Other

08 44

EPA/Other

08 44

EPA/Other

08 44

EPA/Other

08 44

EPA/Other

08 44

EPA/Other

08 44

EPA/Other

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08 44

EPA/Other

08 44

EPA/Other

J. Additional Descriptions for Materials Listed Above

CONTAMINATED WITH HALOGENATED SOLVENTS

K. Handling Codes for Wastes Listed Above

a. b. c. d.

RO 1

15. Special Handling Instructions and Additional Information

Gloves & Safety Glasses

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
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Printed/Typed Name

FRANK JOHNSON

Signature

[Signature]

Month Day Year

08 27 90

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. CONCEPCION CARRERA

Signature

[Signature]

Month Day Year

08 27 90

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

LOREN BROWN

Signature

[Signature]

Month Day Year

10 12 1990

Please print or type. (Form designed for use on electric typewriter).

Generator's US EPA ID No.

## Instructions on the back

Manifest  
Document No.

Page 1

Information in the shaded areas  
is not required by Federal law.UNIFORM HAZARDOUS  
WASTE MANIFEST

EAD 000646257

## 3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICE  
11310 SHERMAN WAY SUN VALLEY, CA

## 4. Generator's Phone (818)

765-6201

91352

## 5. Transporter 1 Company Name

KING HAZARDOUS WASTE

## 6. US EPA ID Number

CAL 000027490

## 7. Transporter 2 Company Name

## 8. US EPA ID Number

## 9. Designated Facility Name and Site Address

INDUSTRIAL SERVICE CO  
1700 S. SOTO ST.

## 10. US EPA ID Number

LOS ANGELES CA 90023 KAD097452708

## A. State Manifest Document Number

88060470

## B. State Generator's ID

## C. State Transporter's ID

## D. Transporter's Phone

## E. State Transporter's ID

## F. Transporter's Phone

## G. State Facility's ID

## H. Facility's Phone

213-262-9747

## 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

WASTE OIL NOS

combustible liquid NA 1270

## 12. Containers

No.

Type

## 13. Total Quantity

## 14. Unit

Wt/Vol

## 1. Waste No.

State

221

EPA/Other

DE01

State

EPA/Other

State

EPA/Other

State

EPA/Other

## J. Additional Descriptions for Materials Listed Above

## K. Handling Codes for Wastes Listed Above

a.

R01

b.

c.

d.

## 15. Special Handling Instructions and Additional Information

RUBBER GLOVES &amp; SAFETY GLASSES

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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## Printed/Typed Name

ERIK JOHANSON

## Signature

Erik Johanson

Month Day Year

10/31/14910

## 17. Transporter 1 Acknowledgement of Receipt of Materials

## Printed/Typed Name

I CONCEPTION GARRERA

## Signature

I Conception Garrera

Month Day Year

03/14/190

## 18. Transporter 2 Acknowledgement of Receipt of Materials

## Printed/Typed Name

Erik Johanson

## Signature

Erik Johanson

Month Day Year

11/11/1111

## 19. Discrepancy Indication Space

## 20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

## Printed/Typed Name

LUIS MESA

## Signature

Luis Mesa

Month Day Year

10/31/14912

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAY

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-952-7550

GENERATOR

TRANSPORTER

FACILITY

89862742

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.

Page 1

is not required by Federal law

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICE, INC.  
11310 SHERMAN WAY SUN VALLEY CALIF 91352

4. Generator's Phone ( ) 714 420 1

5. Transporter 1 Company Name

DISPOSAL CONTROL SERVICE

6. US EPA ID Number

KAT080034184

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

U.S. ECOLOGY

20 BOY 578

JEATTY N.V. 89002

10. US EPA ID Number

INT330010900

A. State Manifest Document Number

89862742

B. State Generator's ID

HAM036022008

C. State Transporter's ID

007319

D. Transporter's Phone 714 983 0342

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

1-702-553-2003

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

CALIFORNIA REGULATED WASTE ONLY

12. Containers  
No. Type

002 DIM 14100 D

13. Total  
Quantity14. Unit  
Wt/Vol

I. Waste No.

State

181

EPA/Other

NA

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

25-30% DIESEL  
BALANCE SURF DACE

K. Handling Codes for Wastes Listed Above

a.

b.

c.

d.

15. Special Handling Instructions and Additional Information

WEAR KILLER PROTECTIVE EQUIPMENT

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

ERIK L JOHNSON

Signature

[Signature]

Month Day Year

10/4/90

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Jimmy L. Zard

Signature

[Signature]

Month Day Year

10/4/90

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

13) Total quantity received 451 P 4/6/90 J2

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19

Printed/Typed Name

D. D. Lima

Signature

[Signature]

Month Day Year

10/10/90

**UNIFORM HAZARDOUS  
WASTE MANIFEST**

Generator's US EPA ID No.

Manifest  
Document No.

Page 1  
of 1

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
1100 SHERMAN BLVD  
SUNNYVALE CA 95352

4. Generator's Phone (918) 765-6201

5. Transporter 1 Company Name

KING HAZARDOUS WASTE ISALC00000002000000

7. Transporter 2 Company Name

9. Designated Facility Name and Site Address

INDUSTRIAL BELUKO CO  
1700 20TH ST  
LOS ANGELES CA 90023

6. US EPA ID Number

8. US EPA ID Number

10. US EPA ID Number

A. State Manifest Document Number

89862740

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone 1-212-430-2500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

212-262-9747

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

WASTE OIL NOS.

COMBUSTIBLE LIQUID NA 1270

12. Containers  
No. Type

13. Total  
Quantity

14.  
Unit  
Wt/Vol

1. Waste No.

State 221

EPA/Other  
D001

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

MIXED OIL + WATER

K. Handling Codes for Wastes Listed Above

a. R01

c.

d.

15. Special Handling Instructions and Additional Information

WIPER GLOVES - GOGGLES

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

ERIK JOHNSON

Signature

[Signature]

Month Day Year

11/1/90

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. CONCEPCION CARRERA

Signature

[Signature]

Month Day Year

05/08/90

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

LUIS MESA

Signature

[Signature]

Month Day Year

10/11/90

# UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest Document No.

Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICES  
11310 SHERMAN WAY SUN VALLEY, CA. 91352

4. Generator's Phone (818) 765-6201

5. Transporter 1 Company Name

RHO-CHEM CORP.

7. Transporter 2 Company Name

6. US EPA ID Number

1CA D D D B 3 6 4 A 3 2

8. US EPA ID Number

10. US EPA ID Number

9. Designated Facility Name and Site Address

RHO-CHEM CORP.  
425 ISIS AVE.  
INGLEWOOD, CA. 90301

1CA D D D B 3 6 4 A 3 2

A. State Manifest Document Number

89969902

B. State Generator's ID

C. State Transporter's ID

012727

D. Transporter's Phone 213-776-6233

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CA D D D B 3 6 4 A 3 2

H. Facility's Phone

213-776-6233

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No. Type

13. Total Quantity

14. Unit Wt/Vol

1. Waste No.

a. WASTE 1.1.1. TRICHLOROETHANE

ORM-A- UN-2831 F-001

204 DIA 1021000 G

b. ~~WASTE FLAMMABLE LIQUIDS N.O.S.~~

~~D-001 F-003 UN-1993~~

c.

d.

J. Additional Descriptions for Materials Listed Above

A. PROFILE # 1228-

B. PROFILE # 6511 ✓

K. Handling Codes for Wastes Listed Above

a. 01

c.

15. Special Handling Instructions and Additional Information

GLOVES-COGGLES

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

ERIK JOHNSON

Signature

*Erik Johnson*

Month Day Year

10/6/1990

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

GEO. CURTIS #51825

Signature

*GEO. CURTIS*

Month Day Year

06/26/91

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

John Earley

Signature

*John Earley*

Month Day Year

10/6/1990

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

Do Not Write Below This Line

PR 5110  
Rev 9 88

MICHIGAN DEPARTMENT  
OF NATURAL RESOURCES

DO NOT WRITE IN THIS SPACE  
ATT. ☐ DIS. ☐ REJ. ☐ PR. ☐

Section 299.548 MCL or Section 19.2  
Act 136, P.A. 1969

Please print or type

Form Approved OMB No. 2050-0039 Expires 9-30-91

UNIFORM HAZARDOUS  
WASTE MANIFEST

1 Generator's US EPA ID No. **CAT000064625718598**  
Manifest Document No. **3**

2 Page 1 of 3  
Information in the shaded areas is not required by Federal law

3 Generator's Name and Mailing Address  
**Flight Accessory Service**  
**11310 SHERMAN WAY, SUN VALLEY CA.**

A. State Manifest Document Number  
**MI 2047462**

4 Generator's Phone **(818) 765-6201** **91352**

B. State Generator's ID  
**HAHQ 36-022066**

5 Transporter 1 Company Name **Disposal Control Serv.**

C. State Transporter's ID **13033**

6 US EPA ID Number **CAT0800341184**

D. Transporter's Phone

7 Transporter 2 Company Name

E. State Transporter's ID

8 US EPA ID Number

F. Transporter's Phone

9 Designated Facility Name and Site Address  
**CYANOKEM**  
**12381 SHAFER**  
**Detroit MI 45227**

G. State Facility's ID

10 US EPA ID Number

H. Facility's Phone **(313) 353-5880**

11 US DOT Description (including Proper Shipping Name, Hazard Class, and HM ID NUMBER)

12 Containers  
No. Type

**RQ, HAZARDOUS WASTE Solid NOS**  
**ORM-E NA9189 D003, D006, F008**

13 Total Quantity  
14 Unit Wt/Vol  
15 Waste No. **D003**  
**D006**  
**F008**  
16 NIH

**003 DMCD 0000 P**

**003 DMCD 0000 P**

**003 DMCD 0000 P**

**003 DMCD 0000 P**

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**003 DMCD 0000 P**

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**003 DMCD 0000 P**

**003 DMCD 0000 P**

**003 DMCD 0000 P**

K. Handling Codes for Wastes Listed Above  
a/ **1**  
b/ **1**  
c/ **1**  
d/ **1**

J. Additional Descriptions for Materials Listed Above  
**11A) AA CYANIDE / Cadmium WASTE**  
**SEE ATTACHED PROFILE SHEET**  
**Profile # W-13945-**  
**C-22110**

15 Special Handling Instructions and Additional Information  
**WEAR APPROPRIATE SAFETY PROTECTION** **(3XSS)**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name **ERIK JOHNSON** Signature **Erik Johnson** Date **07/06/90**

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name **Michael B. Van Alstine** Signature **Michael B. Van Alstine** Date **07/06/90**

18. Transporter 2 Acknowledgement or Receipt of Materials  
Printed/Typed Name Signature Date

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19  
Printed/Typed Name Signature Date

Printed/Typed Name Signature Date

Printed/Typed Name Signature Date

Printed/Typed Name Signature Date

Printed/Typed Name Signature Date

Printed/Typed Name Signature Date

Printed/Typed Name Signature Date

Printed/Typed Name Signature Date

Printed/Typed Name Signature Date

Printed/Typed Name Signature Date



IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

Manifest Document No. 1010010610421703790		Page 1 of 1	Information in the shaded areas is not required by Federal law.	
Address ACCESSORY SERVICES 17510 SHERMAN WAY, SUN VALLEY CAL		A. State Manifest Document Number <b>89970716</b>		
4. Generator's Phone 818 765-6201	5. US EPA ID Number 91252	B. State Generator's ID H A H A 360220616		
6. Transporter 1 Company Name KING HAZARDOUS WASTE	7. US EPA ID Number K11100000127490	C. State Transporter's ID 2668		
7. Transporter 2 Company Name	8. US EPA ID Number	D. Transporter's Phone 1-213 439-8500		
9. Designated Facility Name and Site Address INDUSTRIAL SERVICE CORP. 1700 SOTO ST LA, CALIF. 90023	10. US EPA ID Number K111019945127018	E. State Transporter's ID		
		F. Transporter's Phone		
		G. State Facility's ID		
		H. Facility's Phone 213-262-9747		
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No. Type	13. Total Quantity	14. Unit Wt/Vol	15. Waste No.
a. WASTE OIL NOS - COMBUSTIBLE LIQUID NA 1270	001 TIT 004010 6			State 221 EPA/Other 12001
b.				State EPA/Other
c.				State EPA/Other
d.				State EPA/Other
J. Additional Descriptions for Materials Listed Above MIXED OIL + WATER		K. Handling Codes for Wastes Listed Above a. R01 b. c. d.		
16. Special Handling Instructions and Additional Information RUBBER GLOVES + GOGGLES				
18. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.				
Printed/Typed Name ERIK JOHNSON		Signature <i>Erik Johnson</i>		Month Day Year 10 07 1990
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature <i>J. Carrera</i>		Month Day Year 07 09 90
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year
Printed/Typed Name		Signature		Month Day Year
19. Discrepancy Indication Space				
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.				
Printed/Typed Name Luis Mesa		Signature <i>Luis Mesa</i>		Month Day Year 07 09 90



# UNIFORM HAZARDOUS WASTE MANIFEST

(Type in block letters, using a typewriter)

Generator's US EPA ID No.

Manifest Document No.

Page 1  
of /

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address

4. Generator's Phone ( )

5. Transporter 1 Company Name

6. US EPA ID Number

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

10. US EPA ID Number

A. State Manifest Document Number

90130316

B. State Generator's ID

C. State Transporter's ID

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers  
No. Type

13. Total Quantity

14. Unit  
Wt/Vol

I. Waste No.

a.					State
b.					EPA/Other
c.					State
d.					EPA/Other
e.					State
f.					EPA/Other
g.					State
h.					EPA/Other
i.					State
j.					EPA/Other

J. Additional Descriptions for Materials Listed Above

K. Handling Codes for Wastes Listed Above

a.	b.
c.	d.

15. Special Handling Instructions and Additional Information

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

Signature

Month Day Year

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

Signature

Month Day Year

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

90130316

GENERATOR

TRANSPORTER

FACILITY

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

89413775

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

FACILITY

## WASTE MANIFEST

Generator's US EPA ID No. CA00004625711019  
Manifest Document

2. Page 1 of 1

Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address

Hawker Pacific  
11310 Serran Way, SUN Valley, CA

4. Generator's Phone

818-965-6201

5. Transporter 1 Company Name

MARTIN INO Pumping

6. US EPA ID Number

CA0000628638

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

Norris Environmental  
5215 SO. Boyle  
Los Angeles, CA 90058

10. US EPA ID Number

CA0097030993

A. State Manifest Document Number

89413775

B. State Generator's ID

HAWA36-022066

C. State Transporter's ID

11508

D. Transporter's Phone

805-251-3737

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

CA001717117171

H. Facility's Phone

213-588-7111

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. RQ WASTE Chromic Acid solution  
Corrosive material UN175512. Containers  
No. Type13. Total  
Quantity14. Unit  
Wt/Vol

15. Waste No.

aattt 91100

GA

State 7927

EPA/Other 0000/000

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

Chromic Acid from plating bath  
Profile # E1455CKO

K. Handling Codes for Wastes Listed Above

a. 15

c.

b.

d.

15. Special Handling Instructions and Additional Information

Wear Personal Protective Clothing

Emergency Contact # (805) 251-3737 E.R. Guide page 60

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

ERIK JOHNSON

Signature

Erik Johnson

Month Day Year

11/02/90

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

LARRY RAMIREZ

Signature

Larry Ramirez

Month Day Year

11/02/90

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

BO TIN VELASCO

Signature

Bo Tin Velasco

Month Day Year

11/02/90



Department of Pollution Control and Ecology  
P. O. Box 9583 Little Rock, Arkansas 72219  
Telephone 501-562-7

1991

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved OMB No. 2050-0039 Expires 9-30-91

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. CA100064625783399		2. Page 1 of 1		Information in the shaded areas is not required by Federal law	
3. Generator's Name and Mailing Address FLIGHT ACCESSORY SERVICES 1130 SHERMAN WAY SUN VALLEY CALIF.				A. State Manifest Document Number AR-483399			
4. Generator's Phone (818) 765-6201				B. State Generator's ID HAHQ-36-022066			
5. Transporter 1 Company Name MARTIN IND. PUMPING, INC.				C. State Transporter's ID PC 1153 H 0649			
6. US EPA ID Number CA00000628656				D. Transporter's Phone (805) 251-3737			
7. Transporter 2 Company Name				E. State Transporter's ID PC ---- H ---			
F. Transporter's Phone							
9. Designated Facility Name and Site Address RINECO CHEMICAL 1007 VULCAN RD. BENTON, ARKANSAS 72015				G. State Facility's ID ARD 981057870			
10. US EPA ID Number ARD 981057870				H. Facility's Phone (501) 778-9082			
11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity		14. Unit Wt/Vol	
		No. Type				I. Waste No.	
a. WASTE PAINT AND RELATED MATERIALS WASTE FLAMABLE LIQUID, NA 1263		011 DM000550 G				D001 F005	
b. WASTE FLAMABLE LIQUID, N.O.S. (M.E.K. TOLUENE) FLAMABLE LIQUID, UN 1993 ERG 90		002 DM001024 G				D001	
c.							
d.							
J. Additional Descriptions for Materials Listed Above 11a) WASTE PAINT RELATED MATERIALS 91-01-0048 11b) LAB PACKS - SEE ATTACHED INVENTORY.				K. Handling Codes for Wastes Listed Above EMERGENCY RESPONSE INFORMATION: ERG GUIDE PAGE 426 - A (818) 765-6201 ERIK JOHNSON			
if no alternate TSDF, return to generator							
15. Special Handling Instructions and Additional Information WEARS GLOVES, GOGGLES, PROTECTIVE CLOTHING AND APPROPRIATE RESPIRATORY GEAR.							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and Arkansas state regulations. If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name ERIK JOHNSON		Signature <i>Erik Johnson</i>		Month Day Year 01/17/91			
17. Transporter 1 Acknowledgement of Receipt of Materials							
Printed/Typed Name TROY LEE SCHUMACKER		Signature <i>Troy Lee Schumacker</i>		Month Day Year 01/17/91			
18. Transporter 2 Acknowledgement of Receipt of Materials							
Printed/Typed Name		Signature		Month Day Year			
19. Discrepancy Indication Space							
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19							
Printed/Typed Name Ken Cogburn		Signature <i>Ken Cogburn</i>		Month Day Year 01/21/91			

EPA Form 8700-22 (Rev. 9-88) Previous edition is obsolete.

NOTICE: THE ORIGINAL AND NOT LESS THAN TWO (2) COPIES MUST MOVE WITH THE HAZARDOUS WASTE SHIPMENT. ONCE DELIVERED THE TREAT.

UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.

Page 1

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICE  
11310 Sherman Way SUN VALLEY CA 91352

A. State Manifest Document Number

88060514

4. Generator's Phone

(818) 765-6201

B. State Generator's ID

404836022066

5. Transporter 1 Company Name

King Hazardous Waste Co. Inc. CAL 0000274910

6. US EPA ID Number

C. State Transporter's ID

2008

7. Transporter 2 Company Name

8. US EPA ID Number

D. Transporter's Phone

213) 439-8500

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address

Industrial Service Co.  
1700 So. Soto St.  
Los Angeles, Ca. 90023

10. US EPA ID Number

YAPD99452708 213) 262-9747

G. State Facility's ID

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No.

Type

13. Total  
Quantity

14. Unit  
Wt./Vol

1. Waste No.

a. Waste Oil N.O.S.

Combustible Liquid N.A. 1270

0 P I T T O P 4 5 0 3

State 22I

EPA/Other D001

b.

State

EPA/Other

c.

State

EPA/Other

d.

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

Waste oil + water

K. Handling Codes for Wastes Listed Above

a. R001

b.

c.

d.

15. Special Handling Instructions and Additional Information

Gloves

16.

GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

KOD KENZEL

Signature

[Signature]

Month Day Year

11/15/91

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. Concepcion Carrera

Signature

[Signature]

Month Day Year

01/22/91

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

11/15/91

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

LUIS MESA

Signature

[Signature]

Month Day Year

11/12/91

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.

Page 1

Information in the shaded areas  
is not required by Federal law.

## 3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICE  
11310 SHELMAN WAY SUN VALLEY CAL.

## 4. Generator's Phone (818) 765-4101

## 5. Transporter 1 Company Name

KING HAZARDOUS WASTE

## 6. US EPA ID Number

KAL1000002104910

## 7. Transporter 2 Company Name

## 8. US EPA ID Number

## 9. Designated Facility Name and Site Address

INDUSTRIAL STORAGE

1700 SO 50TH ST

LOS ANGELES CAL 90017 KAL1000002104910

## 10. US EPA ID Number

## A. State Manifest Document Number

89970718

## B. State Generator's ID

4 NW121316101210161

## C. State Transporter's ID

2668

## D. Transporter's Phone

213-452-2500

## E. State Transporter's ID

## F. Transporter's Phone

## G. State Facility's ID

## H. Facility's Phone

213-662-9747

## 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

WASTE OIL NOS

COMBUSTIBLE LIQUID NA, 1270

## 12. Containers

No.

Type

## 13. Total Quantity

## 14. Unit

Wt/Vol

## 1. Waste No.

State

221

EPA/Other

1001

State

EPA/Other

State

EPA/Other

State

EPA/Other

## J. Additional Descriptions for Materials Listed Above

WASTE OIL + WATER

## K. Handling Codes for Wastes Listed Above

a.

b.

R001

c.

d.

## 15. Special Handling Instructions and Additional Information

GLOVES &amp; GOGGLES

## 16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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## Printed/Typed Name

ERIC JOHNSON

## Signature

Month Day Year

10/2/16/91

## 17. Transporter 1 Acknowledgement of Receipt of Materials

## Printed/Typed Name

J. Concepcion Carrera

## Signature

Month Day Year

02/06/91

## 18. Transporter 2 Acknowledgement of Receipt of Materials

## Printed/Typed Name

## Signature

Month Day Year

## 19. Discrepancy Indication Space

## 20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

## Printed/Typed Name

Luis M. S. A.

## Signature

Month Day Year

12/1/91

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550  
 RT/N/600  
 GENERATOR  
 TRANSPORTER  
 FACILITY

Please print or type. (Form designed for use on elliptical or dot-matrix typewriter).

UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.Page 1  
ofInformation in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT REC... VALLEY...

4. Generator's Phone

5. Transporter 1 Company Name

MARTIN &amp; SONS PUMPING

6. US EPA ID Number

CA D000000000

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

... ..

10. US EPA ID Number

... ..

A. State Manifest Document Number

90017225

B. State Generator's ID

H P HQ 56-322004

C. State Transporter's ID

... ..

D. Transporter's Phone

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

... ..

H. Facility's Phone

... ..

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers

No. Type

13. Total Quantity

14. Unit Wt/Vol

I. Waste No.

a. ... ..

No. Type

PP 1 TT 3000

Quantity

Unit Wt/Vol

State

b. ... ..

No. Type

...

Quantity

Unit Wt/Vol

State

c. ... ..

No. Type

...

Quantity

Unit Wt/Vol

State

d. ... ..

No. Type

...

Quantity

Unit Wt/Vol

State

J. Additional Descriptions for Materials Listed Above

WATER 80%  
CHROME III + VI 3-5%  
SODIUM HYDROXIDE 15-17%

K. Handling Codes for Wastes Listed Above

a. 15

b. ... ..

c. ... ..

d. ... ..

15. Special Handling Instructions and Additional Information

24 HOUR EMERGENCY # 26 745-6001 / ... ..

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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Printed/Typed Name

ERIK JOHNSON

Signature

Erik Johnson

Month Day Year

03 06 91

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

CARL POPP

Signature

Carl Popp

Month Day Year

03 06 91

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

...

Signature

...

Month Day Year

...

19. Discrepancy Indication Space

...

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

BETTY VELASCO

Signature

Betty Velasco

Month Day Year

03 06 91

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

# UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest Document No.

Page 1

Information in the shaded areas is not required by Federal law.

## 3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SER.  
11310 CHILMAN WAY, SUN VALLEY CA

## 4. Generator's Phone

(818) 745-4201

## 5. Transporter 1 Company Name

MARTIN TMD FUMIGATION

## 6. US EPA ID Number

KW10000000000000000000

## 7. Transporter 2 Company Name

## 8. US EPA ID Number

## 9. Designated Facility Name and Site Address

NICKEL ENVIRONMENTAL SERVICE  
5012 S. LOVELL AVE  
LA BREA

## 10. US EPA ID Number

KW10000000000000000000

## A. State Manifest Document Number

89862739

## B. State Generator's ID

41A140361-62101A15

## C. State Transporter's ID

111106

## D. Transporter's Phone

(800) 231-2222

## E. State Transporter's ID

## F. Transporter's Phone

(415) 717-1307

## G. State Facility's ID

213-7111

## 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

WASTE ALKALINE CORROSIVE, LIQUID  
CORROSIVE MATERIAL NA 1719

## 12. Containers

No. Type

## 13. Total Quantity

Unit Wt/Vol

## 14. Unit

Wt/Vol

## I. Waste No.

State

EPA/Other

0002-0007

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

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EPA/Other

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EPA/Other

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EPA/Other

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EPA/Other

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EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

## J. Additional Descriptions for Materials Listed Above

WATER 20%  
CHLORINE 11.4% 3-5%  
SODIUM HYDROXIDE 15-17%

## K. Handling Codes for Wastes Listed Above

a. b.

15

c. d.

## 15. Special Handling Instructions and Additional Information

WEAR PROTECTIVE EQUIPMENT  
4 HRS EMERGENCY PH# 212-745-4201

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: ERIC JOHNSON  
Signature: [Signature]  
Month Day Year: 12/31/91

17. Transporter 1 Acknowledgement of Receipt of Materials  
Printed/Typed Name: CARL POPP  
Signature: [Signature]  
Month Day Year: 12/31/91

18. Transporter 2 Acknowledgement of Receipt of Materials  
Printed/Typed Name: [Name]  
Signature: [Signature]  
Month Day Year: [Date]

19. Discrepancy Indication Space  
[Handwritten notes]

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
Printed/Typed Name: BI TIN VELASCO  
Signature: [Signature]  
Month Day Year: 12/31/91

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

89862739

Please print or type. (Form designed for use on 12 pitch typewriter).

UNIFORM HAZARDOUS  
WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.Page 1  
of 1Information in the shaded areas  
is not required by Federal law.

## 3. Generator's Name and Mailing Address

HAWKER AIRCRAFT / FLIGHT ACCESSORY SER.  
11310 SHERMAN WAY SUN VALLEY, CA

4. Generator's Phone (818) 765-0201

91352

## 5. Transporter 1 Company Name

MARTIN IND PUMPING

## 6. US EPA ID Number

EAP000648626

## 7. Transporter 2 Company Name

## 8. US EPA ID Number

## 9. Designated Facility Name and Site Address

HARRIS ENVIRONMENTAL SERVICE  
5215 S. WATKINS AVE  
L.A. CA 90038

## 10. US EPA ID Number

EAP000648626

## A. State Manifest Document Number

90017226

## B. State Generator's ID

HAHQ26-022006

## C. State Transporter's ID

11506

## D. Transporter's Phone (555) 251-3737

## E. State Transporter's ID

## F. Transporter's Phone

## G. State Facility's ID

CYL697330193

## H. Facility's Phone

313-588-7111

## 11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

a. WASTE ALKALINE (DREXLINE) LIQUID

OXIDIZING MATERIAL NA 1714 1K  
(SODIUM HYDROXIDE)

## 12. Containers

No.

Type

## 13. Total Quantity

Unit

Wt/Vol

## 14. Unit

Wt/Vol

## I. Waste No.

State 21

EPA/Other

D002/1007

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

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EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

## J. Additional Descriptions for Materials Listed Above

WATER 30%  
SODIUM HYDROXIDE 15-17%  
SODIUM HYDROXIDE 15-17%

## K. Handling Codes for Wastes Listed Above

a. 15

b.

c.

d.

## 15. Special Handling Instructions and Additional Information

HAR HAZARDOUS WASTE TREATMENT

## 16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

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## Printed/Typed Name

ERIK

## Signature

[Signature]

Month Day Year

[Month] [Day] [Year]

## 17. Transporter 1 Acknowledgement of Receipt of Materials

## Printed/Typed Name

[Name]

## Signature

[Signature]

Month Day Year

[Month] [Day] [Year]

## 18. Transporter 2 Acknowledgement of Receipt of Materials

## Printed/Typed Name

[Name]

## Signature

[Signature]

Month Day Year

[Month] [Day] [Year]

## 19. Discrepancy Indication Space

## 20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

## Printed/Typed Name

[Name]

## Signature

[Signature]

Month Day Year

[Month] [Day] [Year]

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

Do Not Write Below This Line

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS



**HAZARDOUS  
WASTE MANIFEST**

Generator's US EPA ID No.

Manifest  
Document No.

Page 1  
of 1

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICE  
11310 SHIRMAN WAY SUN VALLEY CAL

4. Generator's Phone (818) 765-6201

91152

5. Transporter 1 Company Name

KING HAZARDOUS WASTE CAL 000027490

8. US EPA ID Number

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

INDUSTRIAL SERVICE  
1700 S. SOTO ST  
L.A. CALIF. 90023

10. US EPA ID Number

10. US EPA ID Number

A. State Manifest Document Number

89970717

B. State Generator's ID

HAHQ360220616

C. State Transporter's ID

2668

D. Transporter's Phone 213-439-8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

213-262-9747

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

WASTE OIL NOS.  
COMBUSTIBLE LIQUID N.A. 1270

12. Containers  
No. Type

13. Total  
Quantity

14. Unit  
Wt/Vol

I. Waste No.

02VIT00375

6

State  
221  
EPA/Other  
0001

State  
EPA/Other

State  
EPA/Other

State  
EPA/Other

J. Additional Descriptions for Materials Listed Above

WASTE OIL & WATER

K. Handling Codes for Wastes Listed Above

a. R01

b.

c.

d.

15. Special Handling Instructions and Additional Information

GLOVES & GOGGLES

16.

**GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name

ERIK JOHNSON

Signature

*Erik Johnson*

Month Day Year

04/19/91

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

J. CONCEPCION CARRERA

Signature

*J. Concepcion Carrera*

Month Day Year

04/19/91

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name

LUIS MESA

Signature

*Luis Mesa*

Month Day Year

04/19/91

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

Please print or type. (Form designed for use on electric typewriter).

# UNIFORM HAZARDOUS WASTE MANIFEST

Generator's US EPA ID No.

Manifest  
Document No.

Page 1  
of 1

Information in the shaded areas  
is not required by Federal law.

3. Generator's Name and Mailing Address

FLIGHT ACCESSORY SERVICE  
11310 SHERMAN WAY, SUN VALLEY CALIF

4. Generator's Phone (818) 765-6201 91352

5. Transporter 1 Company Name

KING HAZARDOUS WASTE

6. US EPA ID Number

CAL 000027490

7. Transporter 2 Company Name

8. US EPA ID Number

9. Designated Facility Name and Site Address

INDUSTRIAL SERVICE  
1700 S SOTO ST  
L.A. CALIF 90023

10. US EPA ID Number

CAL 0099452708

A. State Manifest Document Number

89862738

B. State Generator's ID

CAL 000646257

C. State Transporter's ID

2668

D. Transporter's Phone

213-439-8500

E. State Transporter's ID

F. Transporter's Phone

G. State Facility's ID

H. Facility's Phone

1-213-262-9747

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)

WASTE OIL, NOS COMBUSTABLE  
LIQUID N.A. 1270

12. Containers

No. Type

565  
091TT003915

13. Total Quantity

Unit Wt/Vol

565

14. Unit

Wt/Vol

221

I. Waste No.

State

221  
EPA/Other  
1001

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

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EPA/Other

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EPA/Other

State

EPA/Other

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EPA/Other

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

WASTE OIL + WATER

K. Handling Codes for Wastes Listed Above

R01

b. —

c. —

d. —

15. Special Handling Instructions and Additional Information

GLOVES + GOGGLES

16.

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Printed/Typed Name

ERIK JOHNSON

Signature

*Erik Johnson*

Month Day Year

05/28/91

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name

CONCEPCION CARERA

Signature

*Concepcion Carera*

Month Day Year

05/28/91

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name

Signature

Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.

Printed/Typed Name

LUIS MESA

Signature

*Luis Mesa*

Month Day Year

05/28/91

IN CASE OF AN EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

Do Not Write Below This Line

Yellow: TSDf SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

BOARD OF  
PUBLIC WORKS

COMMISSIONERS

STEVE HARRINGTON  
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CITY OF LOS ANGELES  
CALIFORNIA



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MAYOR

DEPARTMENT OF  
PUBLIC WORKS

BUREAU OF SANITATION

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DIRECTOR  
HARRY M. SIZEMORE  
ROBERT M. ALPERN  
MICHAEL M. MILLER  
ASSISTANT DIRECTORS  
SUITE 1400 CITY HALL EAST  
200 NORTH MAIN STREET  
LOS ANGELES, CA 90012  
(213) 485-5112  
FAX NO. (213) 626-5514

## INDUSTRIAL WASTEWATER PERMIT

PERMIT NO: W-456607

RE-ISSUED APRIL 4, 1991  
EFFECTIVE APRIL 4, 1991  
EXPIRES APRIL 30, 1993

COMPANY NAME: Hawker Pacific Inc., Flight Accessory Services

MAILING ADDRESS: 11310 Sherman Way  
Sun Valley, CA 91352

LOCATION ADDRESS: 11310 Sherman Way  
Sun Valley, CA 91352

EPA PRETREATMENT CATEGORY: Electroplating (Existing Source -  
40 CFR 413 Subparts A, E and F -  
Less than 10,000 GPD)

In accordance with the provisions of the Los Angeles Municipal Code (L.A.M.C.) Section 64.30, the above identified facility is hereby authorized to discharge industrial wastewater through the discharge points identified herein to the City of Los Angeles sewer system in accordance with the effluent limitations, monitoring requirements and other conditions set forth in this permit. Compliance with this permit does not relieve the permittee of its obligation to comply with all pretreatment regulations, standards or requirements under Local, State and Federal laws, including any such laws, regulations, standards or requirements that may become effective during the term of this permit.

Noncompliance with the terms and conditions of this permit shall constitute a violation of the L.A.M.C. Section 64.30. This permit becomes void upon any change of ownership or location whatsoever. In order to continue to discharge after the expiration date of this permit, an application must be filed for a new permit at least 90 days prior to the expiration date.

DELWIN A. BIAGI, Director  
Bureau of Sanitation

BY: *Sh. Alotto for*

DATE: 4-4-91

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**PART 1 - DISCHARGE LIMITATIONS**

- A. The permittee is authorized to discharge industrial wastewater to the City of Los Angeles sewer system from the sampling point(s) listed below.

Description of sampling point(s):

<u>Sampling Point(s)</u>	<u>Description</u>
01	The secured sampling facility located directly after 5-stage clarifier (Attachments GA and M)

- B. The discharge from Sampling Point 01 shall not exceed the following Federal discharge limitations:

**FEDERAL  
DISCHARGE LIMITATIONS**  
(Pretreatment Standards for Existing Sources, 40 CFR 413)

<u>Constituents</u>	<u>Units</u>	<u>Daily Maximum</u>	<u>4-Day Average</u>
Cadmium	mg/l	1.2	0.7
Cyanide(Free) [1]	mg/l	5.0	2.7
Lead	mg/l	0.6	0.4
Total Toxic[2] Organics (TTO)	mg/l	4.57	----

- C. The discharge from Sampling Point 01 shall not exceed the following Local discharge limitations:

LOCAL  
DISCHARGE LIMITATIONS

<u>Constituents</u>	<u>Units</u>	<u>Instantaneous Maximum</u>
Arsenic	mg/l	3.0
Cadmium	mg/l	15.0
Chromium(Total)	mg/l	10.0
Copper	mg/l	15.0
Cyanide (Free)	mg/l	2.0
Cyanide(Total)	mg/l	10.0
Lead	mg/l	5.0
Nickel	mg/l	12.0
pH	Standard Units (S.U.)	5.5-11.0
Silver	mg/l	5.0
Zinc	mg/l	25.0
Dissolved Sulfides	mg/l	0.1
Dispersed Oil & Grease	mg/l	600.0

### Footnotes to Discharge Limitations

- [1] Cyanide (Free) shall mean cyanide amenable to chlorination as defined by 40 CFR 136.
- [2] Total Toxic Organics (TTO) shall be the summation of all quantifiable values greater than 0.01 milligrams per liter for the following toxic organics:

Acenaphthene	4-bromophenyl phenyl ether
Acrolein	Bis(2-chloroisopropyl) ether
Acrylonitrile	Bis(2-chloroethoxy) methane
Benzene	Methylene Chloride
Benzidine	Methyl Chloride
Carbon tetrachloride	Methyl Bromide
(tetrachloromethane)	Bromoform
Chlorobenzene	Dichlorobromomethane
1,2,4-trichlorobenzene	Chlorodibromomethane
Hexachlorobenzene	Hexachlorobutadiene
1,2-dichloroethane	Hexachlorocyclopentadiene
1,1,1-trichloroethane	Isophorone
Hexachloroethane	Naphthalene
1,1-dichloroethane	Nitrobenzene
1,1,2-trichloroethane	2-nitrophenol
1,1,2,2-tetrachloroethane	4-nitrophenol
Chloroethane	2,4-dinitrophenol
Bis(2-chloroethyl) ether	4,6-dinitro-o-cresol
2-chloroethyl vinyl ether(mixed)	N-nitrosodimethylamine
2-chloronaphthalene	N-nitrosodiphenylamine
2,4,6-trichlorophenol	N-nitrosodi-n-propylamine
Parachlorometa cresol	Pentachlorophenol
Chloroform (trichloromethane)	Phenol
2-chlorophenol	Bis(2-ethylhexyl) phthalate
1,2-dichlorobenzene	Butyl benzyl phthalate
1,3-dichlorobenzene	Di-n-butyl phthalate
1,4-dichlorobenzene	Di-n-octyl phthalate
3,3-dichlorobenzidine	Diethyl phthalate
1,1-dichloroethylene	Dimethyl phthalate
1,2-trans-dichloroethylene	1,2-Benzanthracene
2,4-dichlorophenol	Benzo(a)pyrene
1,2-dichloropropane	3,4-Benzofluoranthene
1,3-dichloropropylene	11,12-Benzofluoranthene
2,4-dimethylphenol	Chrysene
2,4-dinitrotoluene	Acenaphthylene
2,6-dinitrotoluene	Anthracene
1,2-diphenylhydrazine	1,12-Benzoperylene
Ethylbenzene	Fluorene
Fluoranthene	Phenanthrene
4-chlorophenyl phenyl ether	1,2,5,6-Dibenzanthracene

[2] Continued

Indeno(1,2,3-cd)pyrene  
Pyrene  
Toluene  
Trichloroethylene  
Vinyl chloride  
Aldrin  
Dieldrin  
Chlordane (technical mixtures and metabolites)  
4,4-DDT  
4,4-DDE  
Tetrachloroethylene  
4,4-DDD  
Alpha-endosulfan  
Beta-endosulfan  
Endosulfan sulfate  
Endrin  
Endrin aldehyde  
Heptachlor  
Heptachlor epoxide  
(BHC-hexachlorocyclohexane)  
    Alpha-BHC  
    Beta-BHC  
    Gamma-BHC  
    Delta-BHC  
(PCB-polychlorinated biphenyls)  
    PCB-1242 (Arochlor 1242)  
    PCB-1254 (Arochlor 1254)  
    PCB-1221 (Arochlor 1221)  
    PCB-1232 (Arochlor 1232)  
    PCB-1248 (Arochlor 1248)  
    PCB-1260 (Arochlor 1260)  
    PCB-1016 (Arochlor 1016)  
Toxaphene  
2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)



## PART 2 - MONITORING REQUIREMENTS

- A. The permittee shall monitor Sampling Point 01 for the following parameters, at the indicated frequency and by the indicated sample type:

<u>Constituents</u>	<u>Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	GPD	-----	Report
Arsenic	mg/l	once/6 mo. [1]	Grab or Composite [2]
Cadmium	mg/l	once/6 mo. [1]	Composite
Copper	mg/l	once/6 mo. [1]	Grab or Composite [2]
Chromium(Total)	mg/l	once/6 mo. [1]	Grab or Composite [2]
Cyanide(Free)	mg/l	once/6 mo. [1]	Grab
Cyanide(Total)	mg/l	once/6 mo. [1]	Grab
Nickel	mg/l	once/6 mo. [1]	Grab or Composite [2]
Lead	mg/l	once/6 mo. [1]	Composite
Zinc	mg/l	once/6 mo. [1]	Grab or Composite [2]
Silver	mg/l	once/6 mo. [1]	Grab or Composite [2]
pH [3]	S.U.	once/6 mo. [1]	Grab
Dissolved Sulfides	mg/l	once/6 mo. [1]	Grab
Dispersed Oil & Grease	mg/l	once/6 mo. [1]	Grab
Chlorides [4]	mg/l	once/6 mo. [1]	Grab or Composite
TTO	mg/l	once/6 mo. [1]	Grab

### FOOTNOTES TO MONITORING REQUIREMENTS

- [1] The sample shall be taken on a day when these substances are likely to be present in their maximum concentration.
- [2] The Local limits can be compared to the results from grab sampling as well as composite sampling.
- [3] The pH of the wastewater discharge to the sewer system shall be monitored and recorded continuously using a pH meter and recorder.
- [4] The City is establishing a data base for chlorides.

- B. The permittee shall satisfy the Total Toxic Organics (TTO) requirement in accordance with the following:

MONITORING

- 1) The IU must prepare an inventory of all toxic organics used and identify the individual toxic organics, listed on pages 4 and 5 of this permit, which can reasonably be expected to be present in the regulated wastewater.
- 2) The IU is then required to analyze only those toxic organic pollutants which would reasonably be expected to be present.
- 3) The inventory and TTO analysis shall be submitted to the City of Los Angeles in accordance with the reporting schedule indicated in Part 3 of this permit. The City may require the IU to support the TTO inventory list with appropriate documentation.

TOXIC ORGANIC MANAGEMENT PLAN

- 1) In lieu of monitoring for TTO and upon written request, the City of Los Angeles may allow the IU to satisfy the TTO requirement by submitting a toxic organic management plan (TOMP) for approval by the City of Los Angeles.
- C. Monitoring and sampling shall be carried out during a period of normal operations.
- D. All handling and preservation of collected samples and laboratory analyses of samples shall be performed in accordance with 40 CFR Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this permit. The handling, storage and analyses of all samples taken for the determination of the wastewater characteristics discharged shall be performed by laboratories certified by the State of California or approved by the Board of Public Works of the City of Los Angeles.

### PART 3 - REPORTING REQUIREMENTS

#### A. Self-Monitoring

The permittee shall implement a self-monitoring program. Monitoring results obtained shall be summarized and reported on a periodic compliance report form and submitted by the 15th day of the month following the monitoring period. The reporting schedule is summarized as follows according to the industrial discharge in gallons per day (GPD):

<u>Industrial Discharge</u>	<u>Monitoring Period</u>	<u>Report Due Date</u>
9,999 GPD or less	Jan 1 - Jun 30	Jul 15
	Jul 1 - Dec 31	Jan 15

The report shall indicate the nature and concentration of all pollutants in the effluent for which sampling and analyses were performed including measured or estimated maximum and average daily flows. The report shall be based upon data obtained through appropriate sampling and analyses performed during the period covered by the report. The data shall be representative of conditions occurring during the reporting period.

- B. If the permittee monitors any pollutant more frequently than required by this permit, using test procedures prescribed in 40 CFR 136 or amendments thereto or otherwise approved by EPA or specified in this permit, the results of such monitoring shall be reported in the compliance report and submitted to the Director.

#### C. Automatic Resampling

If the results of the permittee's wastewater analysis indicates a violation has occurred, the permittee must do the following:

1. Inform the Director of the violation within 24 hours by contacting the Bureau of Sanitation Enforcement Division S.I.U. Section at (213) 485-5874; and
2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days after becoming aware of the violation.

D. Pre-notification of Monitoring and Sampling

The permittee shall notify the Director by telephone at (213) 485-5874 at least 48 hours in advance of any monitoring or sampling to be done. Notification shall include the date, time and location of proposed monitoring or sampling. Monitoring and sampling shall be carried out during a period of normal operations. Prior to the commencement of any sampling or monitoring, the Director may request that the permittee furnish to the Director a split sample and all supporting data (i.e., methodology, flow measuring data, strip chart recordings and other pertinent information). The Director reserves the right to refuse any data developed from the monitoring or sampling activity if the permittee fails to comply with the pre-notification procedure.

E. Slug/Accidental Discharge Notification

The permittee shall notify the Director immediately upon the occurrence of an accidental discharge of substances prohibited by L.A.M.C. Section 64.30 or any slug loads or spills that may enter the public sewer. The Director shall be notified by telephone at (213) 485-5886. The notification shall include location of discharge, date and time thereof, type of waste, including concentration and volume, and corrective action taken. The permittee's notification of accidental cases in accordance with this section does not relieve it of other reporting requirements that arise under Local, State or Federal laws.

Within five (5) days following an accidental discharge, the permittee shall submit to the Director a detailed written report. The report shall contain the following:

1. A description and cause of the slug or accidental discharge, the cause(s) thereof and the impact on the permittee's compliance status. The description should also include the location of discharge and the type, concentration and volume of waste.
2. The duration of noncompliance, including exact dates and times of noncompliance, and if the noncompliance continues, the time by which compliance is reasonably expected to occur.
3. All steps taken or to be taken to reduce, eliminate and prevent recurrence of such a slug discharge, accidental discharge or any other conditions of noncompliance.

F. Operating Upsets

Any permittee that experiences an upset in operations that places the permittee in a temporary state of noncompliance with the provisions of either this permit or with L.A.M.C. Section 64.30 shall inform the Director immediately upon the first awareness of the commencement of the upset at (213) 485-5886.

A written follow-up report of the upset shall be filed by the permittee with the Director within five (5) days. The report shall contain the following information:

- a) A description of the upset or slug load, the cause(s) thereof and the upset's or slug load's impact on the permittee's compliance status;
- b) The duration of noncompliance, including exact dates and times of noncompliance, and if the noncompliance continues, the time by which compliance is reasonably expected to occur; and
- c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset, slug load or other conditions of noncompliance.

The report must also demonstrate that the treatment facility was being operated in a prudent and workmanlike manner.

A documented and verified operating upset shall be an affirmative defense to any enforcement action brought against the permittee for violations attributable to the upset event.

G. Prevention of Spills and Accidental Discharges

1. The permittee shall provide to the City of Los Angeles plans showing facilities and operating procedures in order to provide protection against spills or accidental discharges of prohibited or regulated materials as established by this permit. Such plans shall include, but are not limited to the following:
  - a) Diking systems for containment;
  - b) Alarm systems including test frequency of alarms;
  - c) Employee education programs; and
  - d) Manhole sealing and repiping.

2. The permittee shall provide the spill prevention and accidental discharge control plans showing facilities and operating procedures to the City of Los Angeles for review within 30 days of the effective date of the permit.
3. Plans shall be reviewed and approved by the City of Los Angeles prior to construction of any facilities. However, approval of this plan by the City of Los Angeles does not relieve the permittee from its requirements to meet all applicable Local, State and Federal laws and regulations.

H. Notification of Hazardous Waste Discharged into the POTW

1. Permittees not exempt from the requirements under 40 CFR 403.12(p) shall notify the City of Los Angeles, Bureau of Sanitation; the EPA Region 9, Hazardous Waste Management Division; and the California State Department of Health Services, Toxic Substances Control Division in writing of any discharge into the City of Los Angeles sewer system of a substance, which, if otherwise disposed of, would be a hazardous waste under 40 CFR part 261. The written notification shall be submitted to the City of Los Angeles Bureau of Sanitation, the EPA Region 9 and the California State Department of Health Services.
- I. All reports required by this permit shall be submitted to the Director at the following address:

City of Los Angeles  
Bureau of Sanitation  
4600 Colorado Blvd. M/S 911  
Los Angeles, CA 90039  
Attn: EPA Reporting

**PART 4 - SPECIAL CONDITIONS**

Not Applicable

**PART 5 - STANDARD CONDITIONS**

**SECTION A. DEFINITIONS AND CONDITIONS**

**1. Definitions**

- a) Bi-Weekly - Once every other week.
- b) Bi-Monthly - Once every other month.
- c) Bypass - The intentional diversion of wastes from any portion of a treatment facility.
- d) Categorical Pretreatment Standards - Limitations on pollutant discharges to POTWs, promulgated by EPA in accordance with Section 307 of the Clean Water Act, that apply to specified process wastewaters of particular industrial categories.
- e) Composite Sample - A sample that is collected over time, formed either by continuous sampling or by mixing discrete samples. The sample may be composited either as a flow proportional composite sample (collected either as a constant sample volume at time intervals proportional to stream flow or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquot) or as a time composite sample (composed of discrete sample aliquot collected in one container at constant time intervals providing representative samples irrespective of stream flow).
- f) Cooling Water
  - (1) Uncontaminated - Water used only for cooling purposes which has no direct contact with any raw material, intermediate or final product and which does not contain a level of contaminants detectably higher than that of the intake water.
  - (2) Contaminated - Water used only for cooling purposes which may become contaminated either through the use of water treatment chemicals used for corrosion inhibitors or biocides or by direct contact with process materials and/or wastewater.

- g) Daily Maximum - The maximum allowable discharge of a pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.
- h) Four (4) - Day Average - The maximum allowable value for the average of 4 consecutive sampling days.
- i) Director - The Director of the Bureau of Sanitation of the Department of Public Works of the City of Los Angeles or the duly authorized representative thereof.
- j) Grab Sample - An individual sample collected in less than 15 minutes, without regard for flow or time.
- k) Industrial Wastewater (Industrial Waste) - Any water bearing waste excluding domestic wastewater.
- l) Instantaneous Maximum - The allowable maximum concentration determined from the analysis of any discrete or composited sample collected, independent of the industrial flow rate and the duration of the sampling event.
- m) Interference - A discharge which alone or in conjunction with a discharge or discharges from other sources both:
- 1) Inhibits or disrupts the POTW, its treatment processes or operations or its sludge processes, use or disposal; and
  - 2) Causes a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or prevents the use of disposal of sewage sludge. The following statutory provisions and regulations or permits issued thereunder apply (or more stringent State or Local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA) and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act and the Marine Protection, Research and Sanctuaries Act.



- n) Monthly Average - The maximum allowable value for the average of all observations obtained during one calendar month.
- o) Pass Through - A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, cause a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).
- p) Publicly Owned Treatment Works (POTW) - A treatment works as defined by Section 212 of the Clean Water Act which is owned by the State or municipality. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW treatment plant.
- q) Resource Conservation and Recovery Act (RCRA) - A Federal statute regulating the management of hazardous waste from its generation through ultimate disposal. The Act contains requirements for waste generators, transporters and owners and operators of treatment, storage and disposal facilities.
- r) Slug Load - Any pollutant (including Biochemical Oxygen Demand) released in a discharge at a flow rate or concentration which will cause a violation of the specific discharge prohibitions in 40 CFR 403.5(b) to 403.12(f).
- s) Total Toxic Organics (TTO) - The sum of the masses or concentrations of the specific toxic organic compounds regulated by specific categorical pretreatment regulations which is found in the discharge at specific quantifiable concentrations.
- t) Upset - An exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee, excluding such factors as operational error, improperly designed or inadequate treatment facilities or improper operation and maintenance or lack thereof.

## 2. Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

3. Duty to Comply

The permittee must comply with the provisions of L.A.M.C. 64.30 and all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action or enforcement proceedings, including civil or criminal penalties, injunctive relief and summary abatelements.

4. Duty to Mitigate

The permittee shall take all reasonable steps to minimize or correct any adverse impact to the public treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Modification or Revision of the Permit

This permit may be modified, revoked and reissued or terminated for good causes including, but not limited to, the following:

- a) The incorporation of any new or revised Federal, State or Local pretreatment standards or requirements;
- b) Material or substantial alterations or additions to the discharger's operational processes or discharge volume or character which were not covered in the effective permit;
- c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge;
- d) Information indicating that the permitted discharge poses a threat to the City of Los Angeles' collection and treatment systems, POTW personnel or the receiving waters;
- e) A violation of any terms or conditions of this permit;
- f) Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- g) A revision of or a grant of variance from such categorical standards pursuant to 40 CFR 403.13.
- h) A request of the permittee, provided such request does not create a violation of any existing applicable requirements, standards, laws or rules and regulations; or
- i) A correction of typographical or other errors in the permit.

6. Property Rights

The issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any violation of Federal, State or Local laws or regulations.

7. Limitation of Permit Transfer

An Industrial Wastewater Permit shall not be transferable by operation of law or otherwise, either from one location to another or from one person to another. Statutory mergers or name changes shall not constitute a transfer or a change in ownership.

8. Dilution

The permittee shall not increase the use of potable or process water or, in any way, attempt to dilute an effluent as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

9. General Prohibitive Standards

The permittee shall comply with all the general prohibitive discharge standards in the General Pretreatment Regulations, 40 CFR 403, and the L.A.M.C. Section 64.30. Except as expressly allowed in this Industrial Wastewater Permit, the industrial user shall not discharge wastewater to the POTW, the storm drain system or Waters of the State which contains any of the following:

- a) Gasoline, mercury, total identifiable chlorinated hydrocarbons, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, solvents, pesticides or jet fuel;
- b) Petroleum Oil, nonbiodegradable cutting oil or products of mineral oil origin in amounts that will cause interference or pass through.
- c) Liquids, solids or gases which by reason of their nature or quantity are flammable, reactive, explosive, corrosive or radioactive or by interaction with other materials could result in fire, explosion or injury. This includes, but is not limited to, wastestreams with a closed cup flash point of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21.

- d) Solid or viscous materials which could cause obstruction to the flow or operation of the POTW or the storm drain system;
- e) Toxic pollutants in sufficient quantity to injure or interfere with any wastewater treatment process, to constitute a hazard or cause injury to human, animal, plant or fish life or to exceed any limitation set forth in this Section;
- f) Noxious or malodorous liquids, gases or solids in sufficient quantity, either singly or by interaction with other materials, to create a public nuisance, hazard to life or to prevent entry of any person to the POTW or storm drain system;
- g) Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
- h) Material of sufficient quantity to interfere with any POTW treatment plant process or to render any product thereof unsuitable for reclamation and reuse;
- i) Material of sufficient quantity to cause the POTW to be in noncompliance with sludge use or disposal criteria, guidelines or regulations in connection with Section 405 of the Act, the Solid Waste Disposal Act, the Clean Air Act, the Toxic Substances Control Act, the Marine Protection, Research, and Sanctuaries Act or State criteria applicable to the sludge management method being used;
- j) Material which will cause the POTW to violate its NPDES Permit, applicable Federal and/or State statutes, rules or regulations;
- k) Pigment which is not removed in the treatment processes;
- l) A heat content in such quantities that the temperature of the wastewater at the introduction into the POTW collection system exceeds 140 degrees Fahrenheit or at the introduction into the POTW treatment plant exceeds 104 degrees Fahrenheit. In no event shall any wastewater having a temperature in excess of 100 degrees Fahrenheit be discharged to the storm system or to the Waters of the State;
- m) Pollutants, including oxygen demanding pollutants, released at a flow rate or pollutant concentration which will cause or contribute to interference;
- n) Storm water collected and discharged to the POTW;
- o) Single pass cooling water in excess of 200 gallons per day discharged to the POTW;

- p) Materials which constitute a hazard or causes injury to human, animal, plant or fish life or creates a public nuisance;
- q) Recognizable portions of the human or animal anatomy;
- r) Floatable material which is readily removable;
- s) More than 600 mg/l of total dispersed oil and grease;
- t) More than 0.1 mg/l of dissolved sulfides;
- u) A pH lower than 5.5 or higher than 11.0 or having any other corrosive property capable of causing damage or hazards to structures, equipment or personnel of the sewer system;
- v) Medical or infectious wastes;
- w) Radioactive wastes or isotopes;
- x) Garbage, food, market wastes or food plant wastes that have not been ground by household type or other suitable garbage grinders;
- y) Sharps; or
- z) Any trucked or hauled pollutants, except at discharge points designated by the City.

10. Compliance with Applicable Pretreatment Standards and Requirements

The permittee shall comply at all times with any and all applicable Local, State and Federal pretreatment standards and requirements including any such standards or requirements that may become effective during the term of this permit.

11. Confidentiality

- (a) Any information, except for discharge and effluent data, submitted to the City pursuant to this Section may be claimed by the discharger to be confidential. Any such claim must be asserted at the time of submission of the information or data to the City. The claim may be asserted by stamping the words "Confidential Business Information" on each page containing such information or by other means; however, if no claim is asserted at the time of submission, the City may make the information available to the public without further notice. If such a claim is asserted, the information will be treated in accordance with the procedures set forth in 40 CFR Part 2 (Public Information).

- (b) Information and data provided to the City which is effluent data shall be available to the public without restriction.

## **SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS**

### **1. Proper Operation and Maintenance**

The permittee shall at all times properly operate and maintain all facilities and systems for treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes but is not limited to effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

### **2. Duty to Halt or Reduce Activity**

Upon reduction of efficiency of operation or loss or failure of all or part of the pretreatment facility, the permittee shall, to the extent necessary to maintain compliance with its permit, control its production or discharge (or both) until operation of the pretreatment facility is restored or an alternative method of pretreatment is provided. This requirement applies, for example, when the primary source of power of the pretreatment facility fails or is reduced. It shall not be a defense for a permittee in an enforcement action to state that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

### **3. Removed Substances**

Solids, sludge, filter backwash or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in accordance with section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act.

### **4. Bypass of Treatment Facilities**

- a) Bypass is prohibited unless it is unavoidable to prevent loss of life, personal injury or severe property damage or no feasible alternatives exist.
- b) The permittee may allow bypass to occur which does not cause effluent limitations to be exceeded, but only if it is also for essential maintenance to assure efficient operation.

c) Notification of bypass:

- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior written notice, at least ten days before the date of the bypass, to the City of Los Angeles.
- (2) Unanticipated bypass. The permittee shall immediately notify the City of Los Angeles and submit a written notice to the POTW within 5 days. This report shall specify the following:
  - i) A description of the bypass including its cause and duration;
  - ii) Whether the bypass has been corrected; and
  - iii) The steps being taken or to be taken to reduce, eliminate and prevent a reoccurrence of the bypass.

**SECTION C. MONITORING AND RECORDS**

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit. All equipment used for sampling and analysis must be routinely calibrated, inspected and maintained to ensure their accuracy. Monitoring points shall not be changed without notification to and approval by the Director.

2. Flow Measurements

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharge. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Analytical Methods to Demonstrate Continued Compliance

All sampling and analysis required by this permit shall be performed in accordance with the techniques prescribed in 40 CFR Part 136 and amendments thereto, otherwise approved by EPA, or as specified in this permit.

4. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit using test procedures identified in Section C.3, the results of this monitoring shall be included in the permittee's self-monitoring reports.

5. Inspection and Entry

The permittee shall allow the Director or an authorized representative upon the presentation of credentials and other documents as may be required by law to do the following:

- a) Enter the permittee's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
- b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices or operations regulated or required under this permit;
- d) Sample or monitor, for the purposes of assuring permit compliance, any substances or parameters at any location; and
- e) Inspect any production, manufacturing, fabricating or storage area where pollutants, regulated under the permit, could originate, be stored or be discharged to the sewer system.

The applicant, by accepting any permit issued, does hereby consent and agree to entry upon the premises as described herein. Any person violating this authority shall be guilty of a misdemeanor.

6. Retention of Records

- a) The permittee shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the City of Los Angeles at any time.



- b) All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the City of Los Angeles shall be retained and preserved by the permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

7. Record Contents

Records of sampling and analyses shall include the following:

- a) The date, exact place, time and methods of sampling or measurement, and sample preservation techniques or procedures;
- b) Who performed the sampling or measurements;
- c) The date(s) analyses were performed;
- d) Who performed the analyses;
- e) The analytical techniques or methods used; and
- f) The results of such analyses.

8. Falsifying Information

No person shall knowingly make any false statement, representation or certification in any application, record, report, plan or other document filed with the City of Los Angeles. In addition, no person shall tamper with or knowingly render inaccurate any monitoring device required under this permit.

The reports and other documents required to be submitted or maintained under this Industrial Wastewater Permit shall be subject to:

- (1) The provisions of 18 U.S.C. Section 1001 relating to fraud and false statements;
- (2) The provisions of Section 309 (c) (4) of the Clean Water Act (CWA), as amended, governing false statements, representation or certification; and
- (3) The provisions of Section 309 (c) (6) of the Clean Water Act (CWA), as amended, regarding responsible corporate officers.

## **SECTION D. ADDITIONAL REPORTING REQUIREMENTS**

### **1. Planned Changes**

The permittee shall give notice to the Director 90 days prior to any facility expansion, production increase or process modifications which results in new or substantially increased discharge or a change in the nature of pollutants in the discharge, including the listed or characteristic hazardous wastes for which the Industrial User had submitted initial notification under 40 CFR 403.12(p). The City may require that a new application be filed and a new permit obtained before any planned changes take place.

### **2. Duty to Provide Information**

The permittee shall furnish to the Director any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing or terminating this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

### **3. Signatory Requirements**

All applications, reports or information submitted to the Director must contain the following certification statement and be signed as required in Sections (a), (b), (c), or (d) below:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

- a) By a responsible corporate officer if the industrial user submitting the reports is a corporation. For the purpose of this paragraph, a responsible corporate officer means the following:
  - (i) A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function or any other person who performs similar policy or decision making functions for the corporation; or

- (ii) The manager of one or more manufacturing, production or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second-quarter 1980 dollars) if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
- b) By a general partner or proprietor if the industrial user submitting the reports is a partnership or sole proprietorship respectively.
- c) By a duly authorized representative of the individual designated in paragraph (a) or (b) of this section if:
  - (i) The authorization is made in writing by the individual described in paragraph (a) or (b);
  - (ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the industrial discharge originates, such as the position of plant manager, operator of a well, or a well field superintendent, or a position of equivalent responsibility, or a position having overall responsibility for environmental matters for the company; and
- (iii) The written authorization is submitted to the City.
- d) If an authorization under paragraph (c) of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, or overall responsibility for the environmental matters of the company, a new authorization satisfying the requirements of paragraph (c) of this section must be submitted to the City prior to or together with any reports to be signed by an authorized representative.

#### 4. Annual Publication

A list of all industries which were subject to enforcement proceedings during the twelve (12) previous months shall be annually published by the Director in the largest daily newspaper within its service area. Accordingly, the permittee is apprised that noncompliance with this permit may lead to an enforcement action and may result in publication of its name in an appropriate newspaper in accordance with this L.A.M.C. Section 64.30.

5. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil and/or criminal penalties for noncompliance under L.A.M.C. Section 64.30 or State or Federal laws and regulations.

6. Penalties for Violations of Permit Conditions

The L.A.M.C. Section 64.30 provides that any person who violates a permit condition is subject to a civil penalty in the maximum sum provided by law for each day in which such violation occurs. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of up to \$1000.00 per violation per day and/or by imprisonment in the County Jail of a period of not more than six (6) months. The permittee may also be subject to sanctions under State and/or Federal law.

7. Recovery of Costs Incurred

In addition to civil and criminal liability, the permittee violating any of the provisions of this permit or the L.A.M.C. Section 64.30 or causing damage to or otherwise inhibiting the City of Los Angeles wastewater disposal system shall be liable to the City of Los Angeles for any expense, loss or damage caused by such violation or discharge.

The City of Los Angeles shall bill the permittee for the costs incurred by the City for any cleaning, repair or replacement work caused by the violation or discharge. The permittee shall also be liable for the costs of monitoring and investigation by the City arising from any unlawful discharge. Refusal to pay the assessed costs shall constitute a separate violation of L.A.M.C. Section 64.30.

# APPENDIX

FACT SHEET WITH SUPPORTING DOCUMENTATION

## **FACT SHEET**

### **A. INDUSTRIAL USER INFORMATION**

Hawker Pacific, Inc. (W-456607)  
Flight Accessory Services Division  
11310 Sherman Way  
Sun Valley, CA 91352

Hazardous Waste/Process Supervisor: Erik Johnson  
(818) 765-6201

### **B. DESCRIPTION OF THE FACILITY OPERATIONS**

Hawker Pacific, Inc., Flight Accessory Services Division is involved in machining, overhaul, assembly and surface treatment of aircraft landing gears and hydraulic system parts such as valves and hydraulic pistons. Surface treatment includes alkaline and acid cleaning, vapor degreasing, electroplating of cadmium, nickel and functional chrome, etching and chromating.

Ancillary operations include grinding, painting, baking of painted parts and testing of finished parts using a water-based dye.

The facility receives over 98% of parts from outside customers (commercial airlines, etc.) and renders the above services for a fee.

There is a very small casting process whereby lead anodes used in the electroplating process are cast into mold. The process is dry and casts on the order of 5 pounds of lead per week.

The site plan of the facility is shown in Attachment A. The facility consists of five buildings. The Site Plan of each building is outlined in Attachments B-F. Building #1 contains the main offices and a fairly large machine shop. Sanitary sewage is the only water discharged into the sewer. Lubricating oils associated with machining are collected and ultimately sold as bunker fuel. Building #2 contains the plating lines along with grinding operations. An assembly area and dye testing facility are located in Building #3. Sanitary sewage is discharged to a septic tank while the water used in dye testing is discharged to the sewer via a secured sampling box. A warehouse and some offices are located in Building #4. Sanitary sewage is discharged to a septic tank. Building #5 contains a small maintenance shop, offices and a small paint shop. The paint operations are dry, with associated dry scrubbers, and sanitary sewage is discharged to the sewer.

The plating line in Building #2 was built in 1968 under the ownership of Inchate Corporation. Hawker-Pacific, an

Australian-based firm specializing in defense contracts, purchased the facility in 1987. The only significant process construction in Building #2 has been the replacement of two (2) small nickel plating tanks with one (1) larger nickel plating tank. A new ion-exchange waste treatment system was added at the end of 1989 and is now becoming fully operational (October 4, 1990).

**C. DESCRIPTION OF THE DISCHARGE AND WASTEWATER CONTROL**

**1. PROCESS WASTESTREAMS**

Attachments G and GA show the plating shop layout and Attachment H lists the accompanying tank schedule. Process wastestream are generated from five main areas:

1. Nickel Plating Line
2. Cadmium Cyanide Plating Line
3. Chromating Line
4. Functional Chrome Plating and Alodine
5. Anode Cleaning and Etching

Chromating, Functional Chrome Plating and Alodine rinse waters are discharged to a collection sump where they are then conveyed to the pretreatment system.

Anode cleaning and etching rinsewaters are conveyed directly to the pretreatment system as are rinsewaters from the nickel and cadmium plating lines.

Attachments I-L show process flow diagrams for each production area. A total effluent flow of 1,500-2,000 gpd is listed on these Attachments. However, an October 4, 1990 inspection determined that the flow ranges from 2,000-6,000 gpd depending on production. This is verified by an inspection of water bills which indicates an average discharge of just over 7,000 gpd (accounting for two non-operating days per week) over the May, 1989 to May, 1990 time period.

The flow from each process line was not quantified.

**2. DILUTION WASTESTREAMS**

There are no dilution wastestreams present at this facility. Ion exchange backwash and boiler blowdown are pumped to an evaporator tank and do not enter the sewer system.

Single-pass cooling water from the vapor degreaser is used as make-up water for a running rinse tank.

**3. WASTEWATER CONTROL**

The pretreatment is automated and consists of cyanide destruction and ion exchange. A schematic of the system is outlined in Attachment M.

Cyanide bearing wastestreams are conveyed to holding drums (T01-T04) where cyanide is oxidized by alkaline chlorination through the addition of caustic and sodium hypochlorite.

T05-T18 consists of chemical treatment and associated storage for segregated wastestreams before they enter the ion exchange unit.

After cyanide destruction cadmium bearing wastestreams are chemically treated to an optimum pH before entering a specific anionic resin designed to selectively remove the cadmium ion. Trivalent chromium/lead, hexavalent chromium and nickel wastestreams are all segregated, chemically treated to an optimum pH and conveyed to respective resins to selectively remove the heavy metal ions. Photo-sensitive detectors are installed on the discharge end of the resin to detect breakthrough of the heavy metal. Backwash rates are still being quantified but, during the initial start-up phase, have ranged from twice a day to once every three weeks depending on factors such as type of heavy metal and rate of production. As stated earlier, this backwash water is pumped to an evaporator unit where the metals are concentrated before off-site disposal. The chemical storage units contain float alarms to signal lowering quantities of treatment chemicals. The contractor is training two employees in the operations of the system. After passing through the resins the wastestreams are combined, neutralized and discharged through a 5-stage clarifier/secured sampling box to the City sewer.

The facility has no established toxic organic management plan (TOMP).

**D. DISCHARGE LIMITATIONS AND POINT OF COMPLIANCE**

1. **Hawker Pacific, Inc. Flight Accessory Services Division**, must comply with the following federal pretreatment standards at Sampling Point 01 (secured sampling box located directly after 5-stage clarifier noted on Attachments GA and M).



**FEDERAL CATEGORICAL PRETREATMENT STANDARDS  
FOR HAWKER PACIFIC INC. FLIGHT ACCESSORY SERVICES DIVISION  
(40 CFR 413 Existing Job Shop Electroplater < 10,000 gpd)**

<u>Parameter</u>	<u>Units</u>	<u>Daily Maximum</u>	<u>4-Day Average</u>
Cadmium	mg/l	1.2	0.7
Cyanide (Free)	mg/l	5.0	2.7
Lead	mg/l	0.6	0.4
TTO	mg/l	4.57	---

2. Hawker Pacific, Inc. Flight Accessory Services Division, must comply with the following local limits at Sampling Point 01 (secured sampling box located directly after 5-stage clarifier - noted on Attachments GA and M).

**LOCAL DISCHARGE LIMITATION STANDARDS  
FOR HAWKER PACIFIC INC. FLIGHT ACCESSORY SERVICES DIVISION**

<u>Parameter</u>	<u>Units</u>	<u>Instantaneous Maximum</u>
Arsenic	mg/l	3.0
Cadmium	mg/l	15.0
Copper	mg/l	15.0
Cyanide (Total)	mg/l	10.0
Cyanide (Free)	mg/l	2.0
Dissolved Sulfides	mg/l	0.1
Lead	mg/l	5.0
Nickel	mg/l	12.0
pH	S.U.	5.5 - 11.0
Silver	mg/l	5.0
Total Chromium	mg/l	10.0
Zinc	mg/l	25.0
Oil & Grease (Dispersed)	mg/l	600.0

**E. RATIONALE FOR EFFLUENT LIMITATIONS**

Hawker Pacific, Inc., Flight Accessory Services Division is involved in machining, overhaul, assembly and surface treatment of aircraft landing gears and hydraulic system parts such as valves and hydraulic pistons. Surface treatment includes alkaline and acid cleaning, vapor degreasing, electroplating of cadmium, nickel, and functional chrome, etching and chromating.

The plating line was constructed in 1968. The replacement of two (2) small nickel plating tanks with one (1) larger tank has been the only significant process construction in the proceeding time period and does not satisfy new source criteria as listed in 40 CFR 403.3 K(1)(2)(3).

The facility receives over 98% of the parts undergoing electroplating from outside customers, primarily commercial airlines. Wastewater discharge varies from 2,000-6,000 gpd, depending on production. This is verified by an inspection of water bills for the May 1989 - May 1990 time period indicating an average discharge of 7,000 gpd (accounting for two non-operating days per week). There are no dilution wastestreams present at this facility.

Therefore, Hawker Pacific, Inc. Flight Accessory Services Division qualifies as an existing, non-integrated, job-shop electroplater subject to federal categorical pretreatment standards set in 40 CFR 413 Subparts A, E and F (Electroplating of Common Metals, Coating and Etching, respectively) for dischargers less than 10,000 gpd. Lead casting is not covered under 40 CFR 464 (Metal Casting and Molding) pretreatment standards. Although the process is covered under 40 CFR 461 (Battery Manufacturing), the facility is not subject to this category because it does not manufacture batteries. The lead casting process is, therefore, considered as unregulated.

Sampling Point 01 qualifies as an end of process location. Therefore, Sampling Point 01 will provide a representative sample to determine compliance with applicable federal pretreatment standards.

In addition to federal limitations, local limits must also be met by this facility. Sampling Point 01 qualifies as an end of pipe location. Therefore, local limits apply at this point.

**F. MONITORING REQUIREMENTS**

1. Hawker Pacific, Inc. Flight Accessory Services Division shall monitor Sampling Point 01 for the following parameters, at the indicated frequency and by the sample type:

<u>Constituent</u>	<u>Units</u>	<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	GPD	—	Report
Arsenic	mg/l	1/6 mo. [1]	Grab or Composite [2]
Cadmium	mg/l	1/6 mo. [1]	Composite
Chromium (Total)	mg/l	1/6 mo. [1]	Grab or Composite [2]
Copper	mg/l	1/6 mo. [1]	Grab or Composite [2]
Cyanide (Total)	mg/l	1/6 mo. [1]	Grab
Cyanide (Free)	mg/l	1/6 mo. [1]	Grab
Lead	mg/l	1/6 mo. [1]	Composite
pH [3]	S.U.	1/6 mo. [1]	Grab
Silver	mg/l	1/6 mo. [1]	Grab or Composite [2]
Zinc	mg/l	1/6 mo. [1]	Grab or Composite [2]
Dissolved Sulfides	mg/l	1/6 mo. [1]	Grab
Oil & Grease (Dispersed)	mg/l	1/6 mo. [1]	Grab
Total Toxic Organics (TTO)	mg/l	1/6 mo. [1]	Grab
Chlorides [4]	mg/l	1/6 mo. [1]	Composite

**FOOTNOTES TO MONITORING REQUIREMENTS**

- [1] A sampling frequency of 1/6 mo. corresponds to once every six months or biannually. Sampling should be conducted on a day that is representative of normal discharge.
- [2] Unlike federal categorical pretreatment standards, Local limits can be compared to the results from grab sampling as well as composite sampling.
- [3] The pH of the wastewater discharge to the sewer shall be monitored and recorded continuously using a pH meter and recorder.
- [4] Due to the concerns of meeting its NPDES permit conditions, the city of L.A. is in the process of establishing a data base for chlorides.

**G. REPORTING REQUIREMENTS**

Reporting requirements are in accordance with the provisions of the Los Angeles Municipal Code (L.A.M.C.) Section 64.30.

**H. SPECIAL CONDITIONS**

None Applicable

**I. STANDARD CONDITIONS**

Standard conditions are in accordance with the Los Angeles Municipal Code Section 64.30.

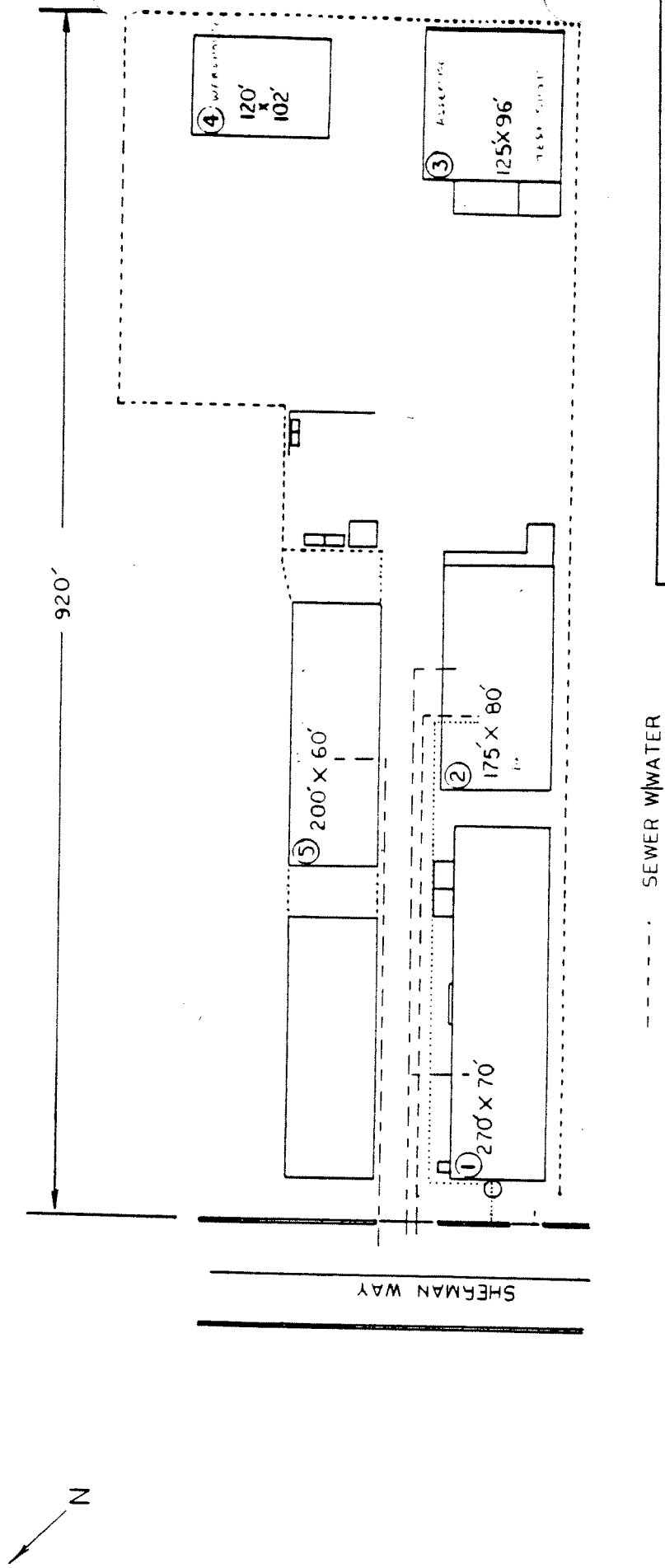
**J. ATTACHMENTS**

Attachment A - Site Plan  
Attachment B - Site Plan (Building #1)  
Attachment C - Site Plan (Building #2)  
Attachment D - Site Plan (Building #3)  
Attachment E - Site Plan (Building #4)  
Attachment F - Site Plan (Building #5)  
Attachment G - Plating Shop Lay-out  
Attachment GA- Plating Shop Lay-out  
Attachment H - Tank Schedule  
Attachment I - Process Flow Diagram - Chrome Plating  
Attachment J - Process Flow Diagram - Alodine  
Attachment K - Process Flow Diagram - Nickel Plating  
Attachment L - Process Flow Diagram - Cadmium Plating &  
Chromating  
Attachment M - Pretreatment System Schematic

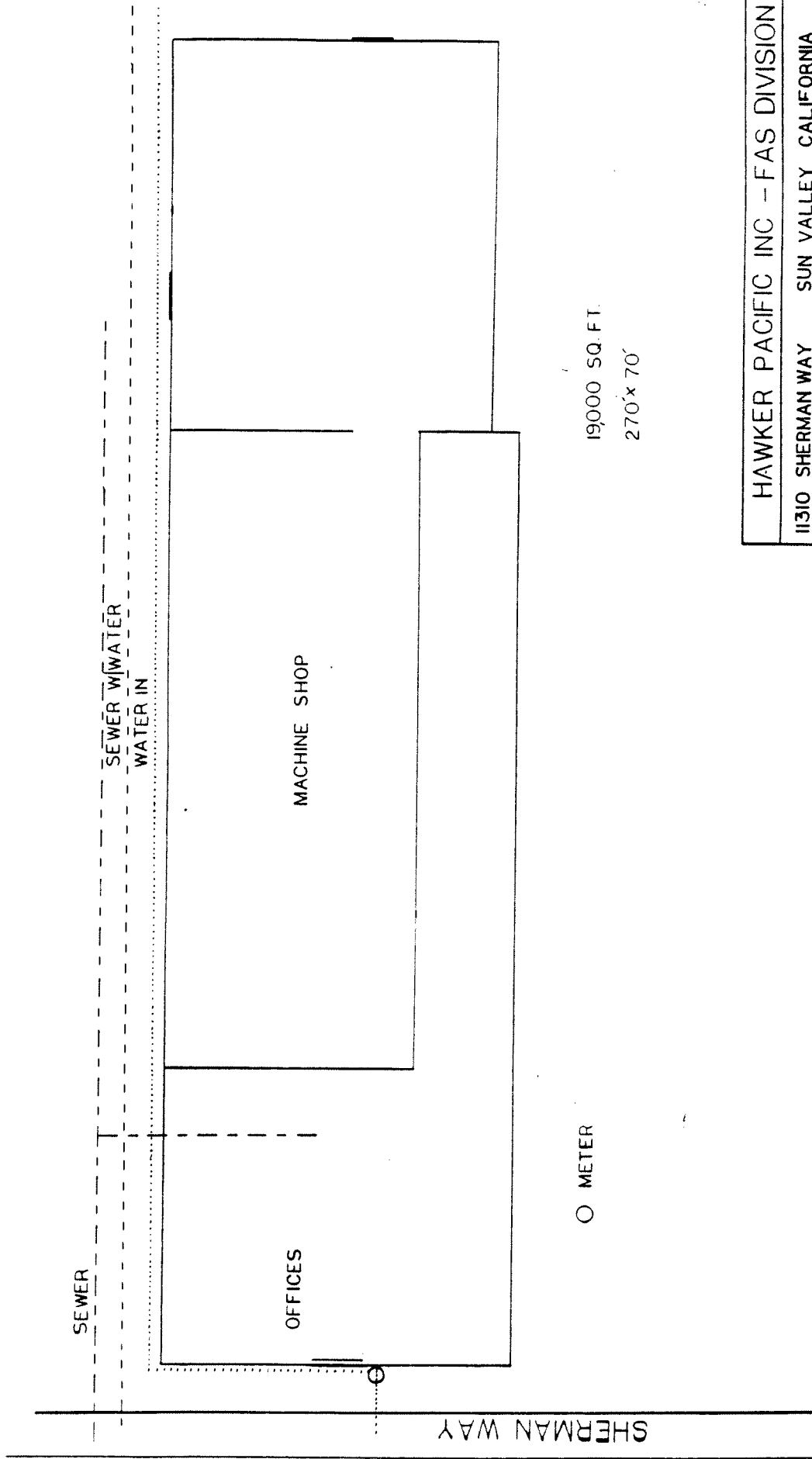
Inspected By: Steven Phan Date: 7.30.90  
Prepared By: Paul Jones Date: 10/25/90  
Reviewed By: Vladimir Arango Date: 11/15/90

HAWFS/DJ/adm

# ATTACHMENT A



HAWKER PACIFIC-FAS DIV.  
 SITE PLAN: 7-1-90  
 DRAWN BY E.J. APPROVED BY *[Signature]*  
 SCALE: 1" = 80'

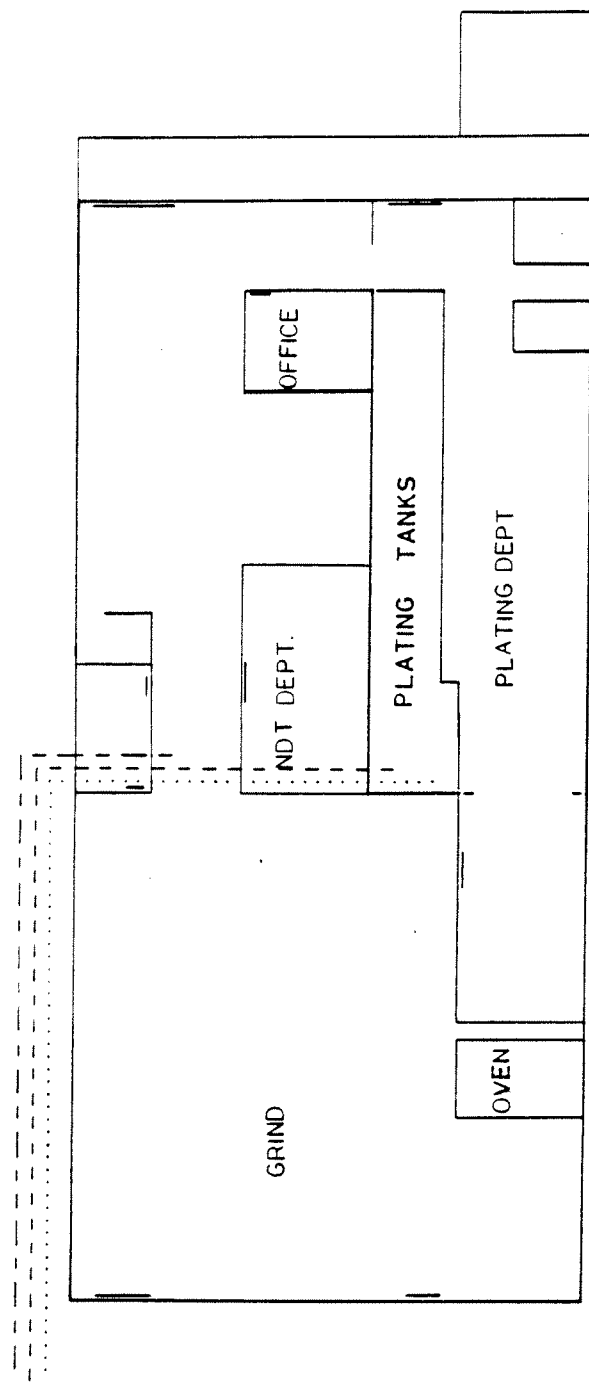


O METER

19000 SQ. FT.

270' x 70'

HAWKER PACIFIC INC - FAS DIVISION			
11310	SHERMAN WAY	SUN VALLEY	CALIFORNIA
BUILDING # 1			
APPROVED BY: <i>[Signature]</i>		DRAWN BY: <i>[Signature]</i>	
SCALE: 1" = 20'		DATE: 8-13-90	



14000 SQ. FT. 175' x 80'

SEWER

SEWER W/WATER

WATER

HAWKER PACIFIC INC - FAS DIVISION

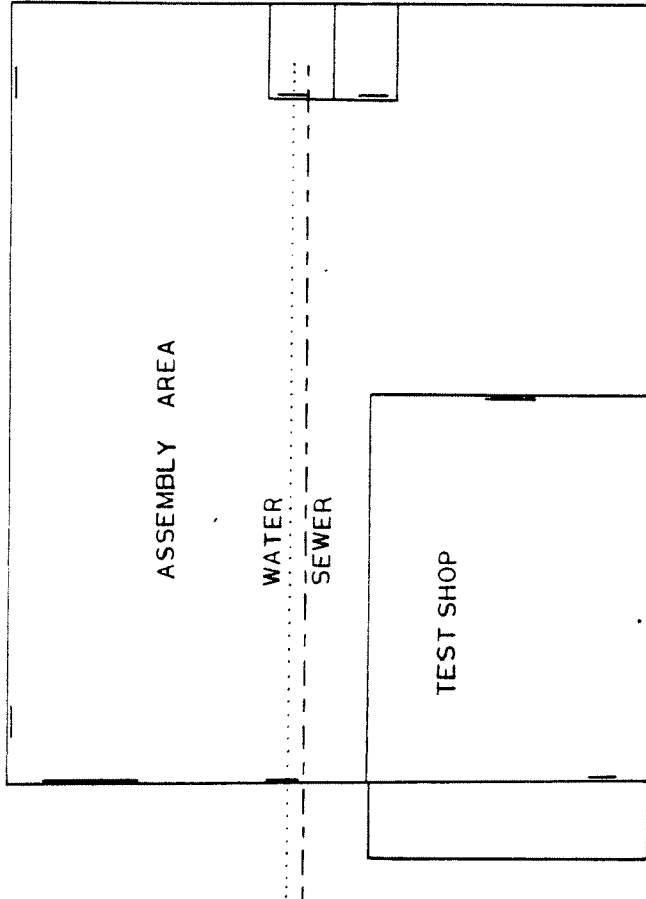
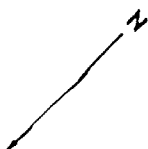
11310 SHERMAN WAY SUN VALLEY CALIFORNIA

BUILDING#2


APPROVED BY: *[Signature]* DRAWN BY: *[Signature]*

SCALE: 1" = 20' DATE: 8-13-90



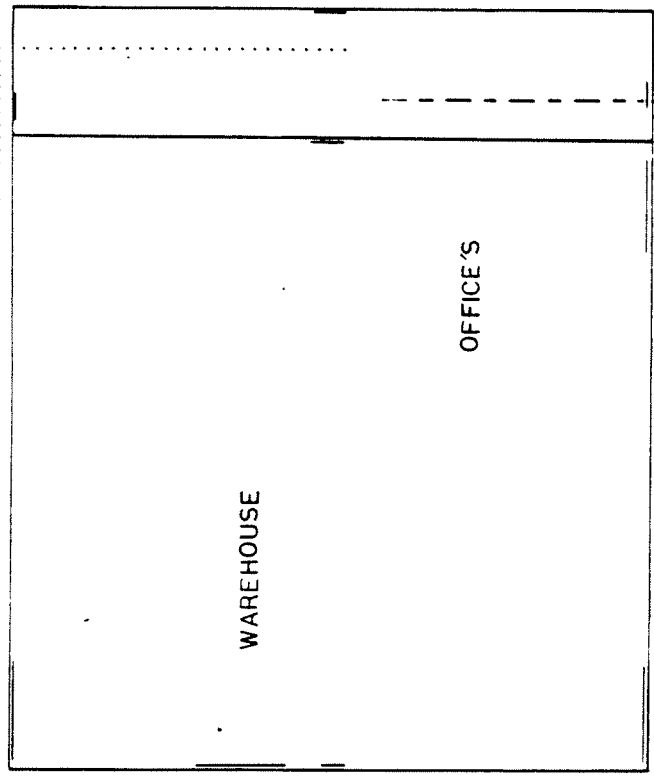


12000 SQ. FT.      125' x 96'

HAWKER PACIFIC INC - FAS DIVISION			
11310	SHERMAN WAY	SUN VALLEY	CALIFORNIA
BUILDING # 3			
APPROVED BY:			
SCALE: 1" = 20'	DATE:	8-13-90	



WATER





OFFICE'S

WAREHOUSE

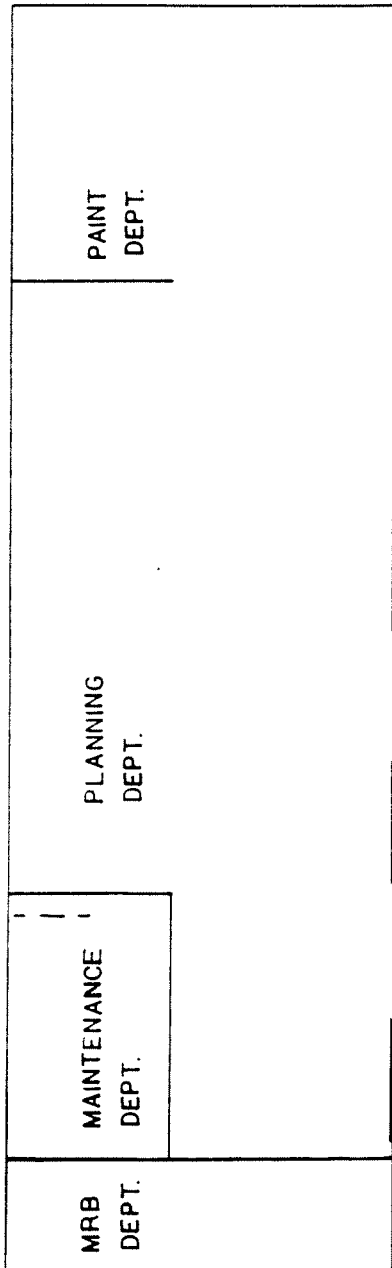
12000 SQ FT      120 x 100

SEWER

HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY	SUN VALLEY CALIFORNIA
BUILDING 4	
APPROVED BY: 	DRAWN BY: 
SCALE: 1" = 25'	DATE: 8-13-90



SEWER ----- WATER -----



12,000 SQ. FT.      200' x 60'

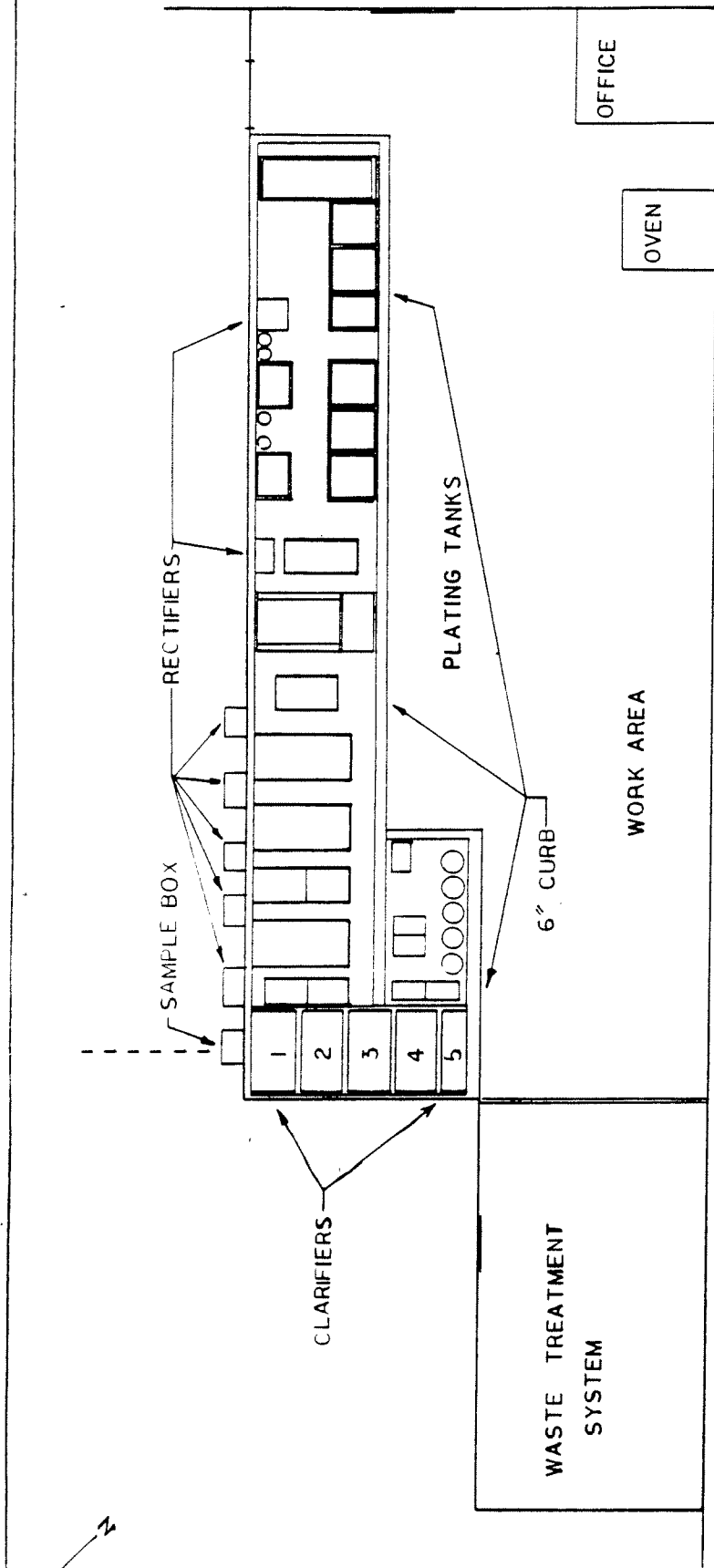
HAWKER PACIFIC INC - FAS DIVISION

11310 SHERMAN WAY      SUN VALLEY CALIFORNIA

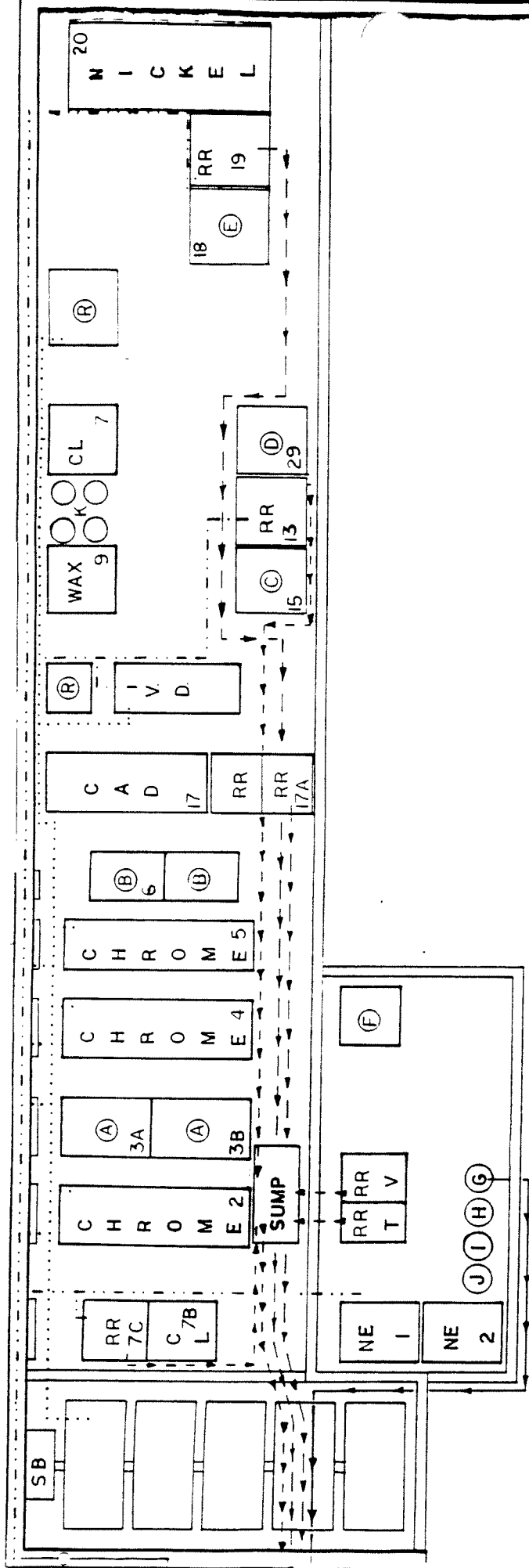
BUILDING # 5

APPROVED *[Signature]* DRAWN BY: *[Signature]*

SCALE: 1" = 20'      DATE: 8-13-90



HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY	SUN VALLEY CALIFORNIA
PLATING SHOP	BUILDING # 2
APPROVED BY: <i>[Signature]</i>	DRAWN BY: <i>[Signature]</i>
SCALE: 1" = 40'	DATE: 8-13-90



CHROME W WATER  
 CAD CYN W WATER  
 NICKEL W WATER  
 ANODE CLEANER W WATER  
 COOLING WATER  
 WATER IN DI

A CHR. STRIP  
 B HOT WATER  
 C CYN NEUT.  
 D IRIDITE  
 E ACID ETCH  
 F ALODINE

G ANODE RINSE  
 H ANODE CLEANER  
 I ALUM CLEANER  
 J DE SMUT  
 K ALUM PREP.  
 R RECTIFIERS

HAWKER PACIFIC INC - FAS DIVISION

11310 SHERMAN WAY, SUN VALLEY CALIFORNIA

PLATING SHOP

APPROVED BY: *[Signature]* DRAWN BY: *[Signature]*

SCALE: 1"=2' DATE: 8-13-90

## FORM A: TANK SCHEDULE

TANK I.D. NUMBER	TANK NAME	TANK VOLUME & DIMENSIONS	TANK CONTENTS	IN	IS THE TANK SPILL CONTAINMENT	TANK CONSTRUCTION MATERIAL
4	CHROME PLATING TANK	3' X 6' X 8' 1000 GAL.	CHROMIC ACID & WATER	1.0	YES	STEEL + LEAD
3-A	CHROME STRIP TANK	2' X 2 1/2' X 7' 250 GAL.	SODIUM HYDROXIDE + WATER	13.0	YES	STEEL
3-B	CHROME STRIP TANK	3' X 3 1/2' X 4' 300 GAL.	SODIUM HYDROXIDE + WATER	13.0	YES	STEEL
2	CHROME PLATING TANK	3' X 6' X 8' 1000 GAL.	CHROMIC ACID + WATER	1.0	YES	STEEL + LEAD.
17-A	CAD RINSE TANK	4' X 6' X 4' 600 GAL.	WATER D.I.	7.0	YES	POLYPRO + STEEL
7-B	OAKITE CLEANER	2 1/2 X 3' X 8' 400 GAL.	SODIUM HYDROXIDE + WATER	13.0	YES	STEEL
7-C	CLEANER RINSE	2 1/2 X 3' X 8' 400 GAL.	D.I. WATER	7.0	YES	STEEL.
NE-1	NITAL ETCH TANK	2' X 4' X 4' 200 GAL.	HCL 3% + WATER	4.0	YES	POLYPRO.
NE-2	NITAL ETCH TANK	2' X 4' X 4' 200 GAL.	NITRIC ACID + WATER 2.5%	4.0	YES	POLYPRO.
F	ALODINE	3' X 3' X 3' 150 GAL.	CHROMIC ACID + WATER	4.0	YES	FIBERGLASS
G	ANODE RINSE TANK	30" DIA X 36" H. 80 GAL.	D.I. WATER	7.0	YES	POLYPRO.

# FORM A: TANK SCHEDULE

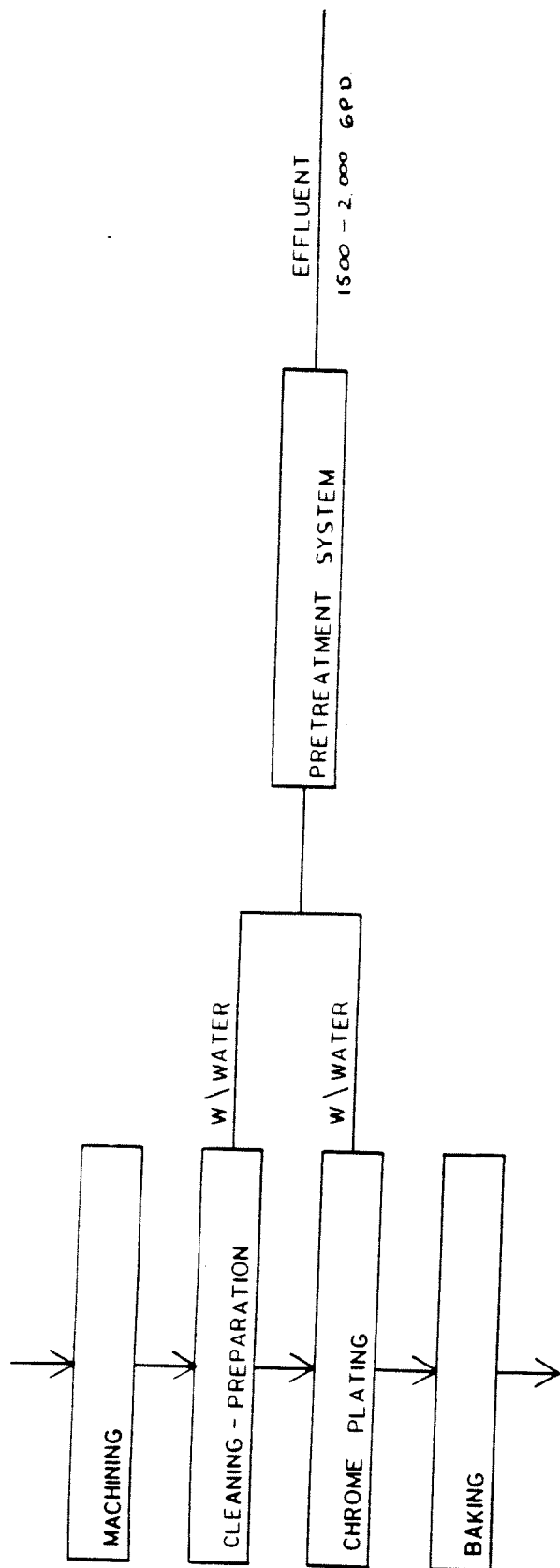
TANK I.D. NUMBER	TANK NAME	TANK VOLUME & DIMENSIONS	TANK CONTENTS	IN	IS THE TANK SPILL CONTAINED?	TANK CONSTRUCTION MATERIAL
20	NICKEL PLATING TANK	3'W X 8 1/2' L X 8' DEEP 1500 GALLON	NICKEL PLATING SOLUTION	4.0	yes	POLY PRO + STEEL
19	NICKEL RINSE	3'W X 3' L X 8' DEEP 500 GALLON	D.I. WATER	7.0	yes	FIBERGLASS
18	ETCH TANK	3'W X 3' L X 8' DEEP 500 GAL.	HF ACID SULFURIC ACID	1.0	yes	POLY PRO + STEEL
29	IRIDIUM TANK	3' X 3' X 8' 500 GALLON	CHROMIC ACID + WATER	4.0	yes	FIBERGLASS + LINER
13	RINSE TANK	3' X 3' X 8' 500 GAL.	D.I. WATER	7.0	yes	FIBERGLASS
15	CHROMIC DIP TANK	3' X 3' X 8' 500 GALLON	CHROMIC ACID + WATER	4.0	yes	FIBERGLASS + LINER
7	OAKITE CLEANER	2 1/2' X 3' X 8' 400 GAL	NAOH + WATER	13+	yes	STEEL.
9	WAX TANK	400 GALL 2 1/2' X 3' X 8'	BROWN WAX HEATED	7.0	yes	STEEL
17	CADMIUM CYANIDE TANK	2 1/2' W X 6' X 8' 900 GAL.	CYANIDE CADMIUM SOLUTION	13.0	yes	STEEL.
6	HOT WATER	6' X 5' X 8' 1400 GALLON	HOT WATER	7.0	yes	STEEL.
5	CHROME PLATING TANK	2 1/2' X 6' X 8' 800 GAL.	CHROMIC ACID + WATER.	1.0	yes	STEEL + LEAD.

# FORM A: TANK SCHEDULE

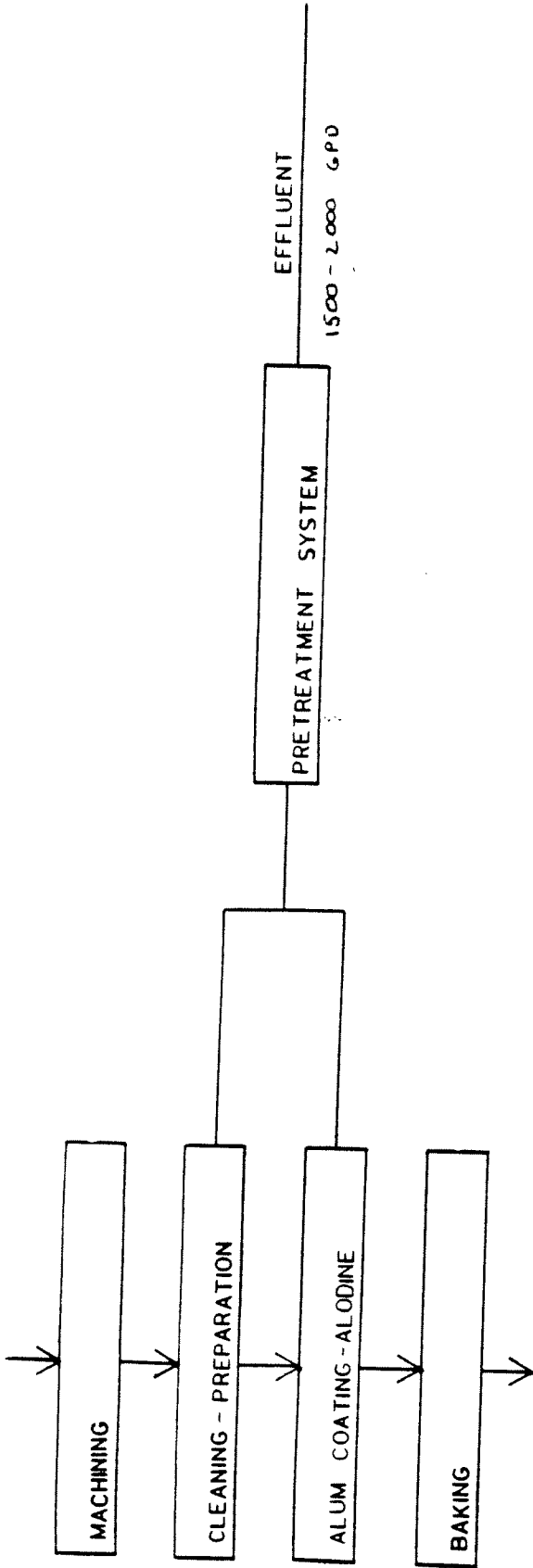
TANK I.D. NUMBER	TANK NAME	TANK VOLUME & DIMENSIONS	TANK CONTENTS	IN	IS THE TANK SPILL CONTAINED?	TANK CONSTRUCTION MATERIAL
H	ANODE CLEANER	30" DIA X 76" 80 GAL.	SODIUM HYDROXIDE + WATER	13.0	YES	POLY PRO
I	DE SMUT	30" X 36" 80 GAL	CHROMIC ACID + NITRIC ACID	2.0	YES	POLY PRO
J	ALUMINUM CLEANER	30" X 36" 80 GAL	SODIUM HYDROXIDE	13.0	YES	POLY PRO
K	ALUMINUM CLEANER 4 TANKS	30" X 36" 80 GAL	NITRIC ACID + WATER	1.0	YES	POLY PRO
		"	NITRIC ACID + WATER	1.0	YES	POLY PRO
		"	AMONIUM NITRATE + WATER	13.0	YES	POLY PRO
		"	ZINCATE	13.0	YES	POLY PRO
T	CHROME RINSE	2' X 4' X 4' 200 GAL	WATER		YES	POLY PRO
V	CHROME RINSE	2' X 4' X 4' 200 GAL	WATER		YES	POLY PRO



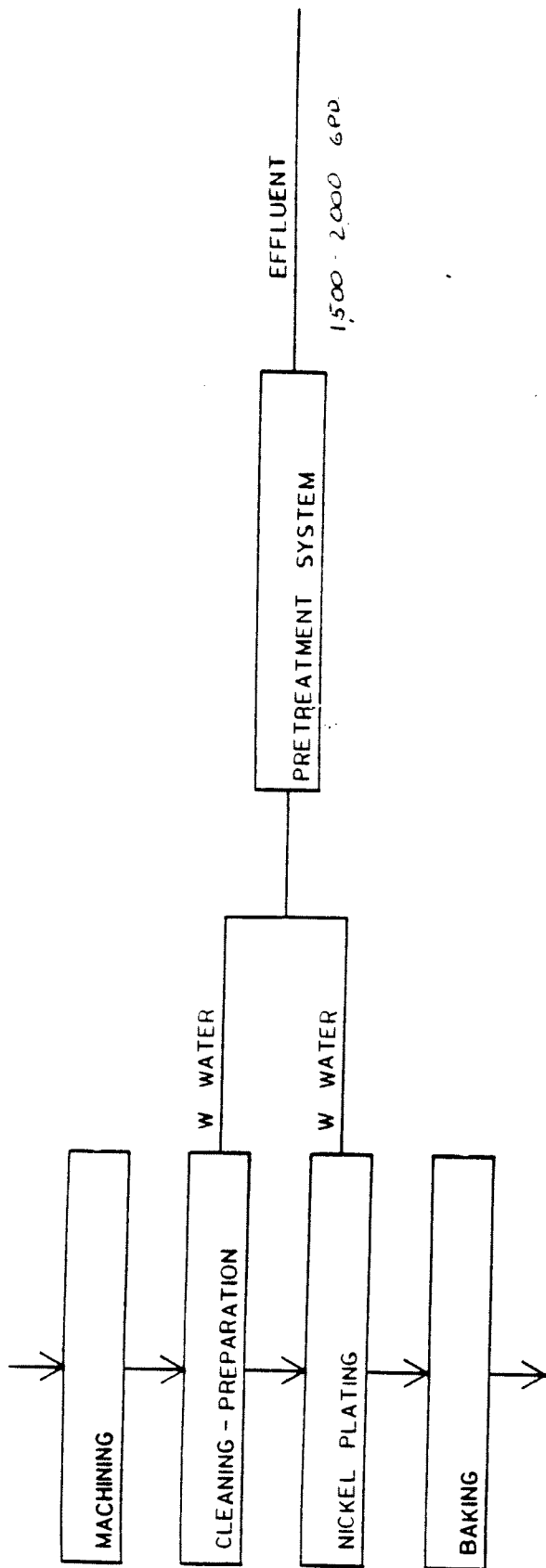
# ATTACHMENT I



HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY	SUN VALLEY CALIFORNIA
PROCESS FLOW DIAGRAM	
APPROVED BY: <i>[Signature]</i> DRAWN BY: <i>[Signature]</i>	
SCALE:	DATE:

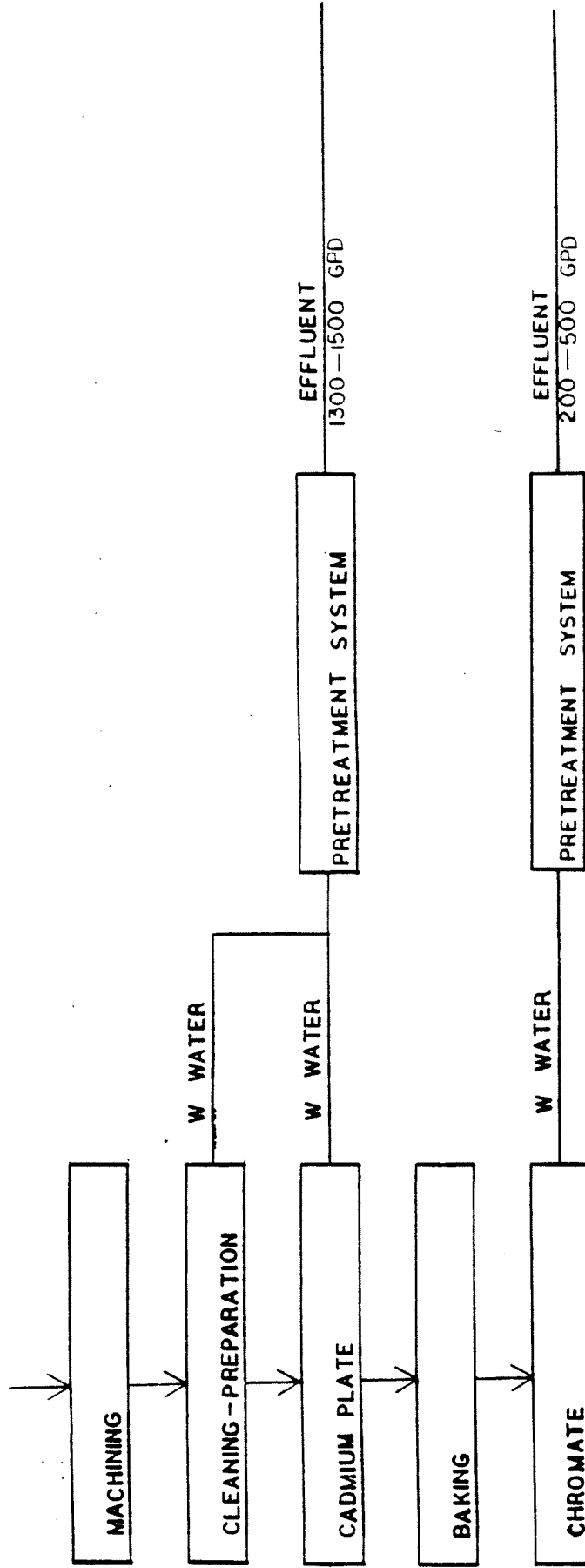


HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY	SUN VALLEY CALIFORNIA
PROCESS FLOW DIAGRAM	
APPROVED BY: <i>[Signature]</i>	DRAWN BY:
SCALE:	DATE:



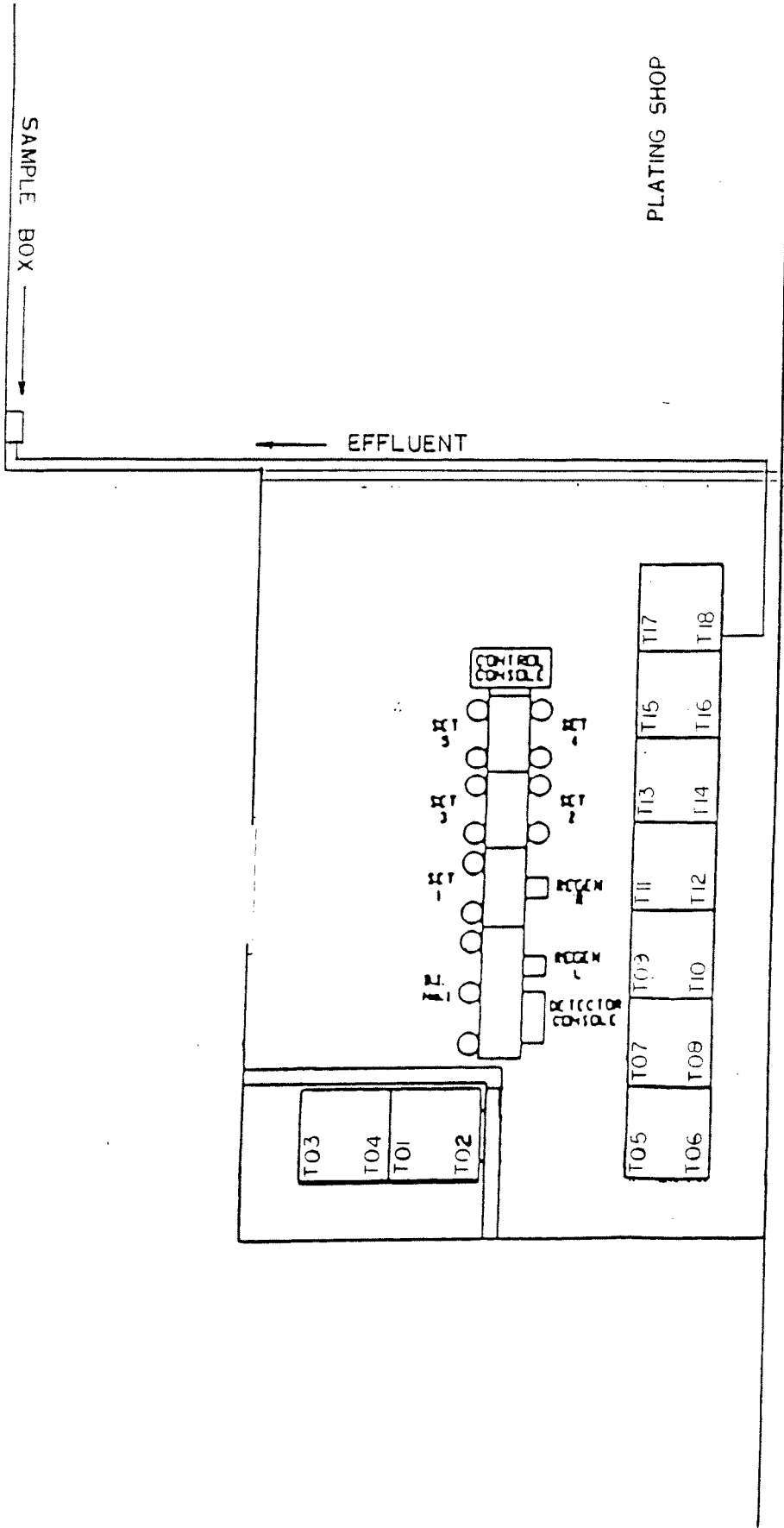
HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY	SUN VALLEY CALIFORNIA
PROCESS FLOW DIAGRAM	
APPROVED BY: <i>[Signature]</i> G. DRAWN BY:	
SCALE:	DATE:

ATTACHMENT L



HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY	SUN VALLEY CALIFORNIA
PROCESS FLOW DIAGRAM	
APPROVED BY:	DRAWN BY: EKJ
SCALE: _____	DATE: 8-13-90

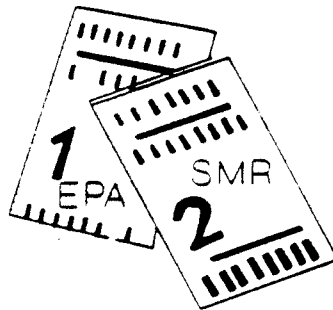
# ATTACHMENT M



HAWKER PACIFIC INC - FAS DIVISION	
11310 SHERMAN WAY	SUN VALLEY CALIFORNIA
PRETREATMENT SYSTEM	
APPROVED BY: <i>[Signature]</i> DATE: 8/13/90	
SCALE: 1" = 2'	

# CITY of LOS ANGELES

## EPA Categorical Industrial User



## ***SELF-MONITORING INSTRUCTIONS & REQUIREMENTS***



**For Facilities Designated**

**40 CFR 413  
ELECTROPLATER  
< 10,000 gpd  
NON-INTEGRATED w/  
CONTINUOUS DISCHARGE**

10/01/90

SELF-MONITORING REQUIREMENTS ( )

MONITORING AND REPORTING FREQUENCY [40 CFR 403.12(e)]

The Industrial User must implement a Self-Monitoring program. Monitoring results obtained must be summarized and reported on a periodic compliance report form and submitted by the 15th day of the month following the monitoring period. The reporting schedule summarized below is applicable only to categorical Industrial Users which are subject to 40 CFR 413 and which have a daily discharge flow less than 10,000 gpd.

SEMI-ANNUAL MONITORING AND REPORTING FREQUENCY

Monitoring Period	Report Due Date
-------------------	-----------------

January	
February	
March	
April	
May	
June	

July 15
---------

July	
August	
September	
October	
November	
December	

January 15
------------

CONTROL AUTHORITY CONTACTS

Industrial Users within the City of Los Angeles may contact the Control Authority to obtain further information regarding the following subjects at the following address and phone numbers.

**Self-Monitoring Reporting**

All periodic Compliance self-monitoring reports required by the Control Authority must be submitted to the Control Authority at the following address:

City of Los Angeles  
Bureau of Sanitation  
Enforcement Division, Mail Stop 911  
4600 Colorado Blvd.  
Los Angeles, CA 90039  
Attn: EPA Reporting

**EPA Pretreatment Program and Self-Monitoring Requirements**

**Prenotification of Self-Monitoring sampling.**

City-Wide Inspection Section (213) 485-5874

**Self-Monitoring procedures.**

Self-Monitoring Review Section (213) 237-0806

**Self-Monitoring violations.**

Significant Industrial User Inspection Section (213) 485-5874  
Self-Monitoring Review Section (213) 237-0806

**Discharge Standards.**

Permitting Section (213) 237-0806  
Enforcement Section (213) 485-7580  
EPA Reporting Section (213) 237-0806

**Industrial User Category.**

Permitting Section (213) 237-0806  
EPA Reporting Section (213) 237-0806

**Control Authority Sampling and Inspection Operations (procedures and processes)**

Inspection Administration (213) 485-5886  
Significant Industrial User Inspection Section (213) 485-5874

**Waste Minimization and Source Control**

Toxic Organic Management Plan (TOMP) (213) 237-0806



SELF-MONITORING REQUIREMENTS (cont.)

For additional guidance regarding Local, State and Federal regulations and procedures contact one or more of the following:

Self-Monitoring Review	(213) 237-0802
EPA Reporting Section	(213) 237-0806
Permitting Section	(213) 237-0806
Toxic Organic Management	(213) 237-0806
Enforcement Section	(213) 485-7580
Inspection Administration	(213) 485-5886
SIU Inspection Section	(213) 485-5874
City Wide Inspection	(213) 485-5874

PERIODIC COMPLIANCE REPORT **SEND REPORT TO:**

BUREAU OF SANITATION  
ENFORCEMENT DIVISION  
4000 COLORADO BLVD  
LOS ANGELES CA 90030  
ATTN: REPORTING SECTION

**THIS IS A DESCRIPTION OF YOUR FACILITY**

I.W. PERMIT # W- PERMIT NUMBER HERE PHONE # (DAYTIME OFFICE)

COMPANY NAME: NAME OF BUSINESS FACILITY

COMPANY ADDRESS: STREET ADDRESS OF FACILITY

MAXIMUM DAILY FLOW: **→ during the reporting period**

AVERAGE DAILY FLOW:

CYANIDE WASTE FLOW: AVERAGE during the reporting period

**Production Data as required**

REPORTING PERIOD (CHECK ONE)

Check the proper reporting period

REGULATED TOXIC ORGANICS INVENTORY LIST

REGULATED TOXIC ORGANICS USED (IF NONE MUST STATE NONE)

AMOUNT USED PER MONTH

INVENTORY DATE:

AMOUNT USED PER MONTH

List TTOs and quantity used monthly. TTOs are listed on page 11, 11a or 11b.

SAMPLE #	LOCATION SAMPLE TAKEN	LABORATORY NAME	SAMPLE TAKEN BY (PERSON NAME)	PRENOTIFICATION DATE ** MM/DD/YY	REPORTED FLOW (GPD)	FLOW WAS * (CHECK) M E C
1	Describe the Sample Point (cyanide destruct, sample box manhole, batch tank)	Lab performing analysis	Who took the sample?	DATE YOU called	FLOW on DAY Sampled	MEASURED
2						ESTIMATED
3						CALCULATED
4						

I.W. PERMIT #: W-12345C

PAGE 2 OF 2

POLLUTANTS (in mg/l)	FEDERAL LIMITS (POINT SOURCE) MAXIMUM		ALTERNATIVE LIMITS FOR DAILY MAX. AND 4 - DAY AVERAGE USING CWF	LOCAL LIMITS INSTANTANEOUS MAXIMUM (C)	LAB SAMPLE # 1 SAMPLE DATE	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 2 SAMPLE DATE	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 3 SAMPLE DATE	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 4 SAMPLE DATE	VIOL (A) AND/OR (B) (C)	4 - DAY AVERAGE RESULT FROM (B) YES /NO	VIOL (B) YES /NO
	DAILY (A)	4 - DAY (B)												
ARSENIC				3.00	9/12/90 0.01		9/29/90 0.12		10/15/90		11/1/90		9/12/90	
CADMIUM	1.20	0.70		15.00	0.80	B	0.60		0.74		0.58		0.68	NO
COPPER	4.50	2.70		15.00	0.30		1.20		1.32		1.02		0.96	NO
NICKEL	4.10	2.60		12.00	1.20		1.07		0.97		0.84		1.02	NO
SILVER				5.00	0.01		0.05							
CHROMIUM	7.00	4.00		12.00	1.02		3.20		1.50		1.32		1.76	NO
ZINC	4.20	2.60		25.00	1.50		1.40		2.10		2.67	B	1.92	NO
LEAD	0.60	0.40		5.00	0.13		0.69	A,B						
C. METALS	10.50	6.80			4.02		6.87	B	5.89		5.85		5.66	NO
CYANIDE(f)				2.00	0.02		0.13							
CYANIDE(t)	1.90	1.00		10.00	0.50		0.34							
D. SULFIDES				0.10	0.01		0.02							
TTO	2.13				0.32		0.14							
pH (pH unit)				5.5 - 11.0	8.30		7.53							
OIL & GREASE				600.0	10.2		15.4							
CHLORIDES				-----	120.0		90.3							

t = TOTAL, f=FREE, D=DISSOLVED, VIOL=VIOLATION, TIO=TOTAL TOXIC ORGANICS, CALC.=CALCULATED, CWF=COMBINED WASTESTREAMS FORMULA, MAX.=MAXIMUM  
( ALL CALCULATIONS FOR COMBINED WASTESTREAMS FORMULA MUST BE SHOWN IN ATTACHMENTS OF THIS REPORT )

### IF IN VIOLATION, ATTACH A STATEMENT OF REASON FOR VIOLATION AND CORRECTIVE ACTION TAKEN

I CERTIFY THAT OUR COMPANY ( ) IS NOT CONSTANTLY IN COMPLIANCE WITH THE EPA PRETREATMENT STANDARDS AND THE CITY OF LOS ANGELES EFFLUENT LIMITS. I HAVE PROPERLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS DOCUMENT AND ATTACHMENTS. BASED ON MY INQUIRY OF THOSE INDIVIDUALS RESPONSIBLE FOR OBTAINING THE INFORMATION SUBMITTED HEREIN, I CERTIFY THAT THE SUBMITTED INFORMATION IS TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT AS DIRECTED BY THE 40 CFR 403.12 (K) AND L.A.M.C. 64.30 (C) 8.

*John Doe*

JOHN DOE

PRESIDENT

11/14/90

AUTHORIZED REPRESENTATIVE SIGNATURE

PRINT NAME

TITLE

DATE

## PERIODIC COMPLIANCE REPORT



FORM - SN413E0E

EPA SEMI-ANNUALLY PERIODIC COMPLIANCE REPORT FOR EXISTING  
SOURCE NON-INTEGRATED JOB-SHOP ELECTROPLATING WITH AN  
AVERAGE DISCHARGE FLOW LESS THAN 10,000 GPD ( 40 CFR 413 )

SEND REPORT TO:  
BUREAU OF SANITATION  
ENFORCEMENT DIVISION  
4600 COLORADO BLVD  
LOS ANGELES CA 90039  
ATTN. REPORTING SECTION

I.W. PERMIT # W-

PHONE # ( )

COMPANY NAME:

COMPANY ADDRESS:

MAXIMUM DAILY FLOW:

(GPD) ☐ MEASURED ☐ ESTIMATED ☐ CALCULATED

AVERAGE DAILY FLOW:

(GPD) ☐ MEASURED ☐ ESTIMATED ☐ CALCULATED

## REPORTING PERIOD

(GMSCK ONE)

☐ JAN - JUN 19--☐ JUL - DEC 19--

## REGULATED TOXIC ORGANICS INVENTORY LIST

## INVENTORY DATE:

REGULATED TOXIC ORGANICS USED  
( IF NONE MUST STATE NONE )AMOUNT USED  
PER MONTHREGULATED TOXIC ORGANICS USED  
( IF NONE MUST STATE NONE )AMOUNT USED  
PER MONTH

SAMPLE #

LOCATION SAMPLE  
TAKENLABORATORY  
NAMESAMPLE TAKEN  
BY  
(PERSON NAME)PRENOTIFICATION  
DATE \*\*  
MM/DD/YYREPORTED  
FLOW  
( GPD )FLOW WAS  
\* (GMSCK)  
M E C

\* M - MEASURED

E - ESTIMATED

C - CALCULATED

\*\* TO PRENOTIFY CALL (213) 485-5874

PAGE 2 OF 2

POLLUTANTS (in mg/L)	FEDERAL LIMITS (POINT SOURCE) MAXIMUM		ALTERNATIVE LIMITS FOR DAILY MAX. AND 4 - DAY AVERAGE USING CUF	LOCAL LIMITS INSTANTANEOUS MAXIMUM (C)	LAB SAMPLE # 1 SAMPLE DATE / /	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 2 SAMPLE DATE / /	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 3 SAMPLE DATE / /	VIOL (A) AND/OR (B) (C)	LAB SAMPLE # 4 SAMPLE DATE / /	VIOL (A) AND/OR (B) (C)	4 - DAY AVERAGE RESULT FROM TO	VIOL (B) YES /NO
	DAILY (A)	4 - DAY (B)												
ARSENIC				3.00										
CADMIUM	1.20	0.70		15.00										
COPPER				15.00										
NICKEL				12.00										
SILVER				5.00										
CHROMIUM				12.00										
ZINC				25.00										
LEAD	0.60	0.40		5.00										
5. METALS														
CYANIDE(P)	5.00	2.70		2.00										
CYANIDE(S)				10.00										
D. SULFIDES				0.10										
TTO	4.57													
pH (ph unit)				5.5 - 11.0										
OIL & GREASE				600.0										
CHLORIDES				-----										

t = TOTAL, f=FREE, D=DISSOLVED, VIOL=VIOLATION, TIO=TOTAL TOXIC ORGANICS, CALC.=CALCULATED, CUF=COMBINED WASTESTREAMS FORMULA, MAX.=MAXIMUM  
( ALL CALCULATIONS FOR COMBINED WASTESTREAMS FORMULA MUST BE SHOWN IN ATTACHMENTS OF THIS REPORT )

## IF IN VIOLATION, ATTACH A STATEMENT OF REASON FOR VIOLATION AND CORRECTIVE ACTION TAKEN

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AUTHORIZED REPRESENTATIVE SIGNATURE

PRINT NAME

TITLE

DATE